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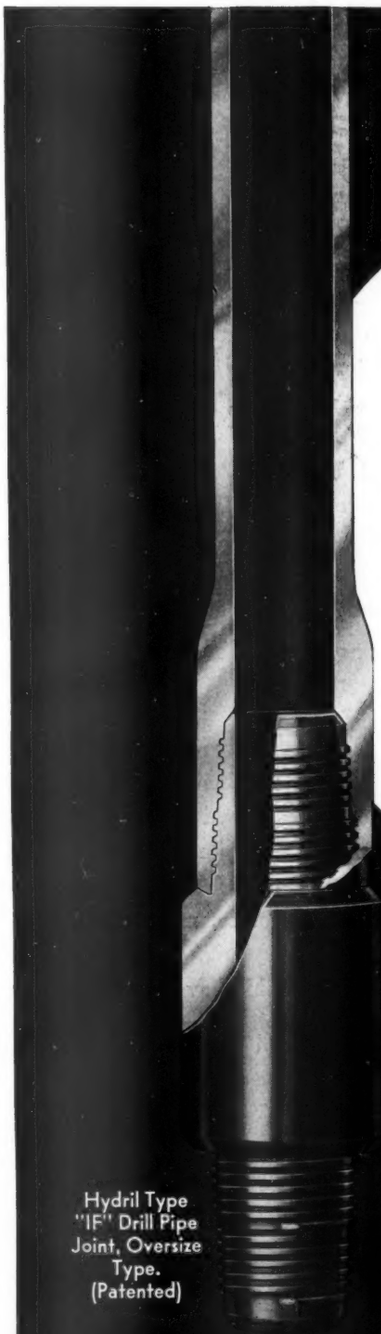

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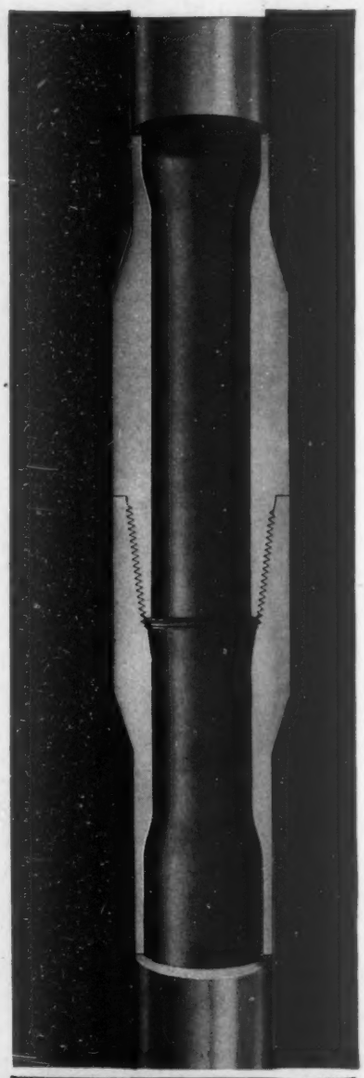

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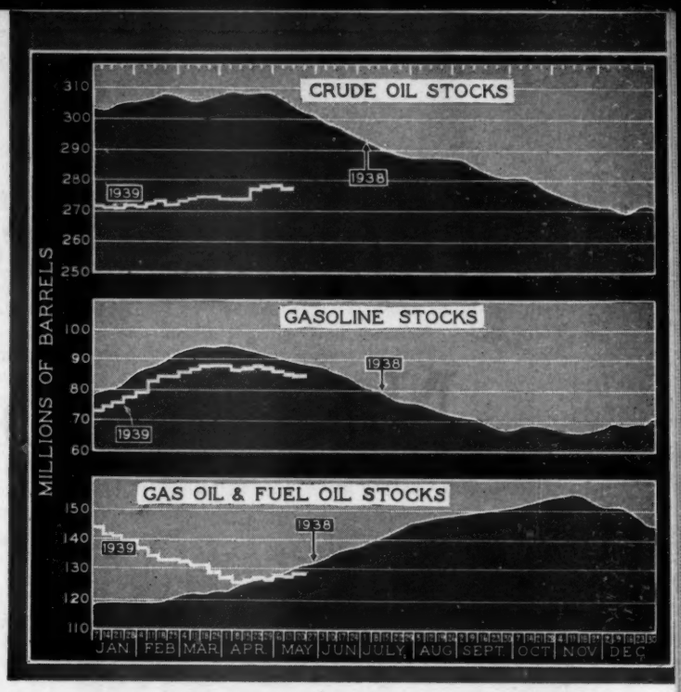
Trends

Texas Commission Strengthens Market With Its New Order



THE Railroad Commission of Texas, in ordering Texas fields to shut down on all Saturdays as well as all Sundays in June, performed a distinct service to the whole oil industry. The commission's previous "holiday" order included all Sundays, but only two Saturdays, in May and June. The new ruling will result in a greatly decreased daily average production in the state and will have a good moral effect in these days when too much production has been engendering fears of crude price cuts.

CRUDE PRODUCTION *3,587,540 bbl. daily average—up 146,574 bbl. One year ago 3,109,287 bbl.*

CRUDE STOCKS *277,068,000 bbl. as of May 20—down 671,000 bbl. One year ago 302,597,000 bbl.*

GASOLINE STOCKS *84,294,000 bbl. as of May 20—down 514,000 bbl. One year ago 88,825,000 bbl.*

GAS AND FUEL OIL STOCKS *128,250,000 bbl. as of May 20—up 713,000 bbl. One year ago 131,455,000 bbl.*

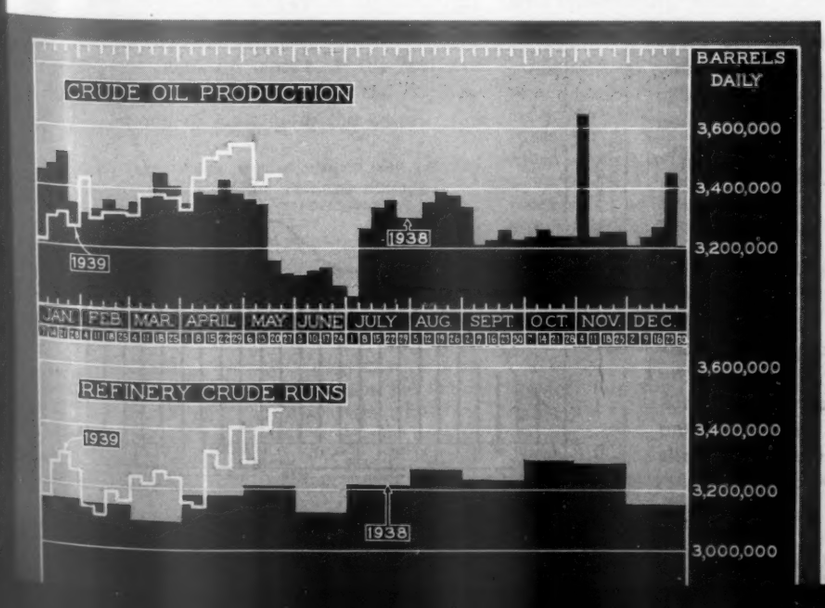
REFINERY RUNS *3,460,000 bbl. daily week ending May 20—up 60,000 bbl. One year ago 3,201,000 bbl.*

(Later A.P.I. figures on refinery stocks and runs not available owing to Memorial Day holiday.)

While much criticism has been directed at Louisiana and California for lack of cooperation in keeping production down to requirements, the Illinois situation causes the most worry.

The 218,000-bbl. daily production of Illinois last week represents only a part of what the state can produce. Production of wells in the big Salem and Louden fields is being greatly curtailed. The pipe lines could not take care of the potential production of these two fields, even if there were a market demand for it. In the past five weeks production in the state increased from 185,000 bbl. to 218,000 bbl. per day, and average initial production per well is becoming greater as Salem field operators develop the possibilities of the rich McClosky-lime pay. A 6,000-bbl. well from that formation, completed last week, followed two 4,200-bbl. wells from the same pay the previous week causing one to wonder if this prolific lime may not supply wells as large as those in some limestone fields of the Mid-Continent. This thought is disturbing because there is no production control in Illinois, and no indication that the state legislature is interested in the conservation of Illinois' new source of wealth.

The action of the Railroad Commission of Texas shows that the commissioners appreciated the danger that threatened in the form of reduced prices. Oil accumulated during the time fields were permitted to produce on two Saturdays a month, and it was reported to the commission that crude was being sold in great quantities below the posted market prices. The new holiday order should directly strengthen all oil markets.

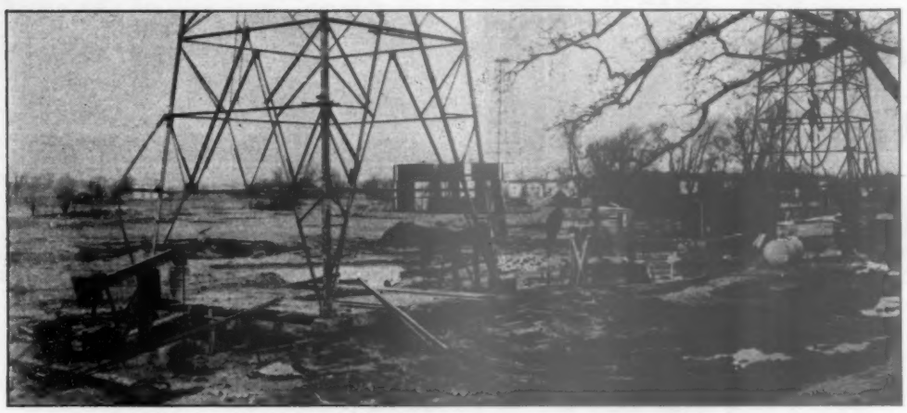


DAILY AVERAGE PRODUCTION FOR WEEK

	May 27, 1939	Bur. Mines May est. of demand	May state allowables	May 20, 1939
Oklahoma City	99,650	.....	.....	107,400
Fitts	26,700	.....	.....	27,025
Remainder of state	323,375	.....	.....	328,825
Total Oklahoma	449,725	455,800	428,000	463,250
East Texas	446,247	.....	.....	372,348
West Texas	234,148	.....	.....	197,397
North Central Texas	118,200	.....	.....	114,049
Texas Panhandle	70,000	.....	.....	70,900
East Central Texas	97,547	.....	.....	91,796
Gulf Coast Texas	379,550	.....	.....	341,297
Southwest Texas	116,297	.....	.....	97,448
Total Texas	1,461,989	1,406,100	1,398,077	1,285,335
North Louisiana	72,860	.....	.....	73,335
Gulf Coast Louisiana	195,100	.....	.....	194,000
Total Louisiana	267,960	261,600	263,634	267,335
California	614,500	582,600	575,000	625,750
Kansas	161,750	152,600	170,350	175,550
Arkansas	55,100	52,900	.....	55,205
Eastern fields	98,750	102,900	.....	99,900
Illinois	218,128	159,700	.....	214,700
Michigan	63,848	50,000	.....	63,891
New Mexico	116,850	115,500	113,100	116,880
Rocky Mountain area	78,940	85,500	.....	73,170
Total United States	3,587,540	3,425,200	.....	3,440,966

A generally firmer tone pervades the refinery market. The opening of the vacation season, with its prospect of record-breaking motor travel, has imparted a lift to gasoline, stiffening quotations in that division. Substantial withdrawal from overheavy stocks has encouraged hope that inventories will be brought to an economic level. Raising of tank-wagon and dealer prices to normal levels in areas where there has been demoralizing competition is helping to put tankcar prices on a healthier basis. The Standard of Indiana, which last week brought tank-wagon and posted dealer prices to normal levels in Illinois and Indiana, followed by extending the movement to Wisconsin.

Mounting Production in Illinois Now Perplexing Problem



By HARRY F. SIMONS

EVANSVILLE, Ind., May 29.—Production from the Illinois basin fields, increasing steadily since the area's discovery, jumped phenomenally during the past five weeks from a daily average of 155,000 bbl. to 210,000 bbl. The basin fields passed the 100,000 mark early in last December, but development was somewhat retarded by adverse weather. At its present production rate of over 218,000 bbl. per day, the state has surpassed predictions of its ability to produce made earlier in the year. (Fig. 1.)

At the Pittsburgh A.P.I. meeting in April, a production superintendent for one of the major companies interested in Illinois predicted production in the state would reach between 200,000 and 225,000 bbl. daily during the present year. (The Oil and Gas Journal, Apr. 13, p. 43). Another prediction in the same issue, based on recent activity, placed the peak at 280,000 bbl., although admitting that 200,000 bbl. was a more conservative estimate. An estimate by an oil company executive late last week gave the peak for this year at close to 300,000 bbl. daily with 200,000 bbl. coming from the prolific Salem field alone.

The production in the area is restricted only by pipe line proration and curtailment under agreements between major producers and the independent offsets to 40 and 50 bbl. per day. Those not wishing to agree to this voluntary proration system are producing to capacity whenever they have a market. This, in turn, forces offset lease owners to step up their production.

Any hope of legal restriction in the state disappeared with the recent refusal of the legislative committee headed by Rep. Oral P. Tuttle of Harrisburg to recommend passage of any regulatory measure. Instead, the committee approved bills requiring the filing of logs with the state geological department; placing of meters on pipe lines and lease flow lines; the drilling of offsets, and the display of signs in filling stations showing how much Illinois crude was used in manufacturing the products for sale.

The situation at present has producers interested in the area pondering over what the future holds for the state in the way of new production, peak production, sustained production, revision of markets to provide outlets for this crude and the transportation facilities necessary to get the crude to the refineries.

It is evident the state is looming increasingly large in the national picture as is shown by the following table. (Bureau of Mines figures, except for 1939), which gives daily average figures.

PRODUCTION

(Thousands of barrels)

Year	Illinois	United States	Illinois per cent of total
1936	4,475	1,099,687	0.41
1937	7,426	1,277,653	0.58
1938	23,929	1,212,530	1.97
Wk. ending 5-27-39	218	3,588	6.08

New discoveries and development of the present fields will probably enable the state to maintain its production at around 200,000 bbl. daily for several years, according to men acquainted with the Illinois producing horizons. They also point out that some indication of the future activity may be gained from the undeveloped leases in the area which total over 2,800,000 acres at the present time. More leasing is being done daily, although lease prices are now higher than formerly. Many of the lease agreements call for development any time a well is completed within a specified distance. This distance varies in different agreements from ¼ to ½ mile. In many cases these commitments cause more rapid development of a field than could otherwise be expected.

Some idea of the close spacing prevailing along the "road way" leases in the Salem field is gained from the photograph above

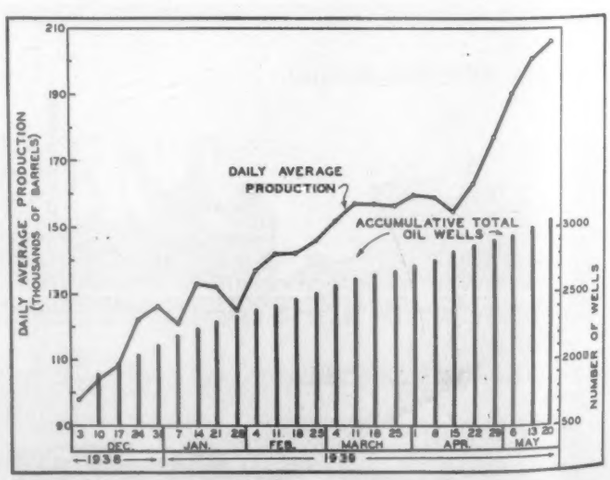


Fig. 1—Daily average production in Illinois by weeks from December 3, 1938, and the accumulated total number of oil wells in the same period

New Production

Production in pay zones deeper than the McClosky lime are a distinct possibility in the two major Illinois fields, Salem and Louden, and generally throughout the state. The Devonian lime is particularly attractive to some operators and considerable production has been obtained from this formation in the older fields in the state.

Sustained Production

Due to several factors, the state will probably be able to maintain its present rate of production while the present producing structures are being fully developed. The production is not confined to one pay horizon, and, in the more important fields in the state, several pay formations have been found and are being developed.

In the Louden area production is being obtained from the Cypress, Bethel, and Paint Creek sands, while the Salem field is producing from the Bethel, the Aux Vases sands and the McClosky lime. The Noble and the Noble-Denver fields in Richland County are also obtaining production from the Cypress and the McClosky, the Centralia field from the Cypress and the Bethel, and the Roaches field from the McClosky and the Roseclaire.

Decline of the wells in the Illinois fields averages around 10 per cent per month on open flow in the sand fields, and even faster in the lime fields. Some of the wells in the Salem field will now make only 15 or 20 bbl. daily. However, some wells in that field have been able to maintain a production of around 200 bbl. daily for the past several months.

The average initial production of the wells based on an 8-month survey is 250 bbl. daily, al-

though the wells have run as high as 6,000 bbl. daily. Many wells have never been flowed or pumped to capacity, both the Carter Oil Co. and Texas Co. voluntarily restricting their takings

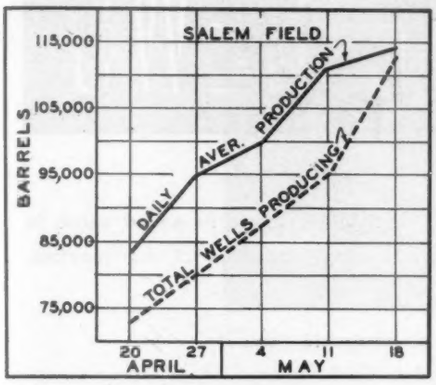


Fig. 2—Daily average production and total wells producing in the Salem field for the five weeks from April 20 to May 18

when they are not forced by offsets to operate otherwise. These wells have been produced at about one-sixth of their capacity and should be able to maintain that rate of production for several years.

The present average rate of production for the Illinois area is around 66 bbl. per well per day. When it is considered that many of the wells in the new fields of the state have already declined to an average of less than 15 bbl. per day, it is evident some wells are producing large quantities to boost this average, and it is doubtful if they can continue to do so for a long time. A

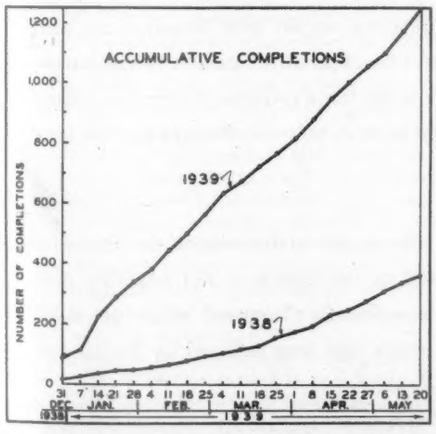


Fig. 3—Accumulative completions in the Illinois basin fields by weeks for the first five months of 1938 and 1939 show the huge increase in activity in the state

table of the average production per well per day for seven of the fields in the state follows.

Field and location—	Av. production per well per day
Salem, 1 and 2n-2e	132
Louden, 7 and 8n-3e	50
Clay City, 2 and 3n-7 and 8e	45
Centralia, 1n-1w	14
Noble, 3 and 4n-9e	23.6
Dix, 1s-2e	51
Patoka, 4n-1e	12

The rich Salem field in Marion County is responsible for over half of the present production of the state, having a daily average of 114,000 bbl. for the week ending May 27. It also has been responsible for about 60 per cent of the increase in the production from the state during the past 5 weeks as production from that field jumped from 83,500 to its present level. (Fig. 2.) The average production per well also increased during that time from 106 to 132 bbl. daily.

Production from the Salem field comes from three principal horizons: the Benoist, at an approximate depth of 1,766 ft., the Aux Vases at 1,801 ft. and the McClosky at 2,000 ft. The field is not developed to its fullest extent in any of the three pay zones, the first being the most fully developed and the others in the order mentioned. All of the pay zones are unusually thick for Illinois and the porosity and permeability in each zone is probably the best in the state. The Benoist and Aux Vases vary from 15 to 50 and even 60 ft. in thickness, while the pay in the McClosky is known to be over 70 ft. thick in some wells. Twenty feet is normally a good sand thickness and 15 ft. a good lime thickness in other fields in the state.

The record well of recent weeks and probably the largest producer in the history of Illinois is W. C. McBride No. 6 Lee, SE NE SE of Section 29-2n-2e in the Salem field. The well had saturation in the McClosky at 1,951-59 and 2,014-47 ft. and made 725 bbl. in 12 hours on natural flow. After acidizing with 4,000 gal. of acid the well made 258 bbl. in 1 hour for a rating of 6,000 bbl. daily. To prove that it was not overestimated the well produced an average of 250 bbl. an hour while choked for 3 days and is still producing at that rate.

The Louden field has no wells to compare with the Salem field and its production is only about one-third of the latter, being approximately 46,000 bbl. daily. The production is also generally more conservatively handled.

Peak Production

Just what the peak production of the state will be is a guess that Illinois oil men are refusing to make. A reason given for the recent increase of 57,500 bbl. in 5 weeks was the better weather which allowed connections to be made to many wells that had been completed during the bad weather, but which had never been on production except for their initial tests. Coupled with better field conditions and the decision to open the McClosky zone in the Salem field, this has made it possible for the basin fields to increase an average of 11,400 bbl. per day each week for the past 5 weeks.

Each new well added since the present development started has increased the daily average production of the state by approximately 50 bbl. On this basis an increase of 50,000 bbl. could be expected during the remainder of the year. An increase of 344 per cent in drilling activity this year over last year is shown by Fig. 3 which shows completions from January 1 to May 7, 1938, and for the same period in 1939. Another indication of the increase in the development is shown by the "active operations" and the "oil completions" curves (Fig. 4), both of which declined almost steadily until the first of May but have now definitely turned upward.

Markets

The sudden elevation to its present producing level has caused a congestion of the market in the area as the available refining capacity in the immediate vicinity is limited. Most major refineries have already been forced to lower their takings from the Mid-Continent and other areas to make room for their Illinois production. The independent producer is required to find his own refinery outlet and this is difficult to do.

The available pipe line capacity of the state is around 100,000 bbl. daily and all crude over this must be shipped by either rail or water. The bulk is going by rail with freight rates being quoted

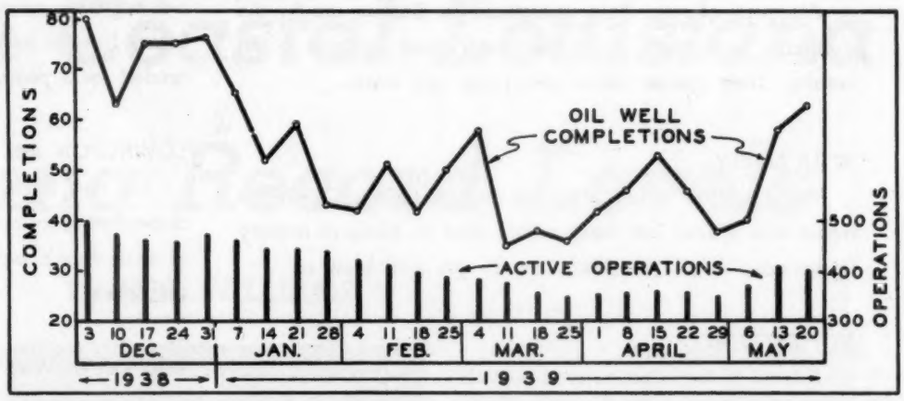


Fig. 4—Oil completions and active operations by weeks for the past six months show decline due to bad weather with the upturn starting in May

to points as far removed as Pennsylvania, Louisiana, Oklahoma and Texas.

The general market situation in Illinois is summed up by Walter H. Voskuil in "The Market for Illinois Oil for 1937 and 1938," recently issued by the state geological department. "The prospect in Illinois is one of sustained production for several years. The short-time prospect is one of an increase above current levels. . . . Present estimates of reserves of 350,000,000 bbl. cover proven areas and make no allowance for untested areas."

Despite the shallow production and the consequent reduction in capital investment, the economic situation is causing Illinois operators to study the area closely. Average cost of the wells in the basin is at present around $15,000 and the lifting cost will be high, particularly if the fields are not curtailed and the gas-energy retained as long as possible through a sound conservation program. Carter Oil Co. has a repressuring plant in the Louden field and Texas Co. has a pressure-maintenance plant in the Salem field. With much of the oil of producers without pipe-line affiliations going at prices under the market, the payout on some of the wells is becoming doubtful.

Operators have reduced expenses as much as possible, the cut in the contract price for drilling wells being a matter of concern to owners of drilling equipment in the area. From the original price of $6 per foot in Illinois, contracts have dropped to as low as $2.25 per foot in the Louden field, $2.50 per foot in the Salem field and $2.75 per foot in the deep lime fields. Another saving is being made by the reduction in size of the hole and the size and cost of the casing used.

SPARKS FROM THE NEWS

GOOD INVESTMENT

That operators in the new Illinois fields are discontented with the cut-priced crude market there is shown by the number of 80,000-bbl. tanks being built to store surplus oil rather than sell it below the market.

GO-GETTERS

Although general field operations in Kansas are in the doldrums, wildcatters in the Sunflower State continue to get results. They opened three new pools last week.

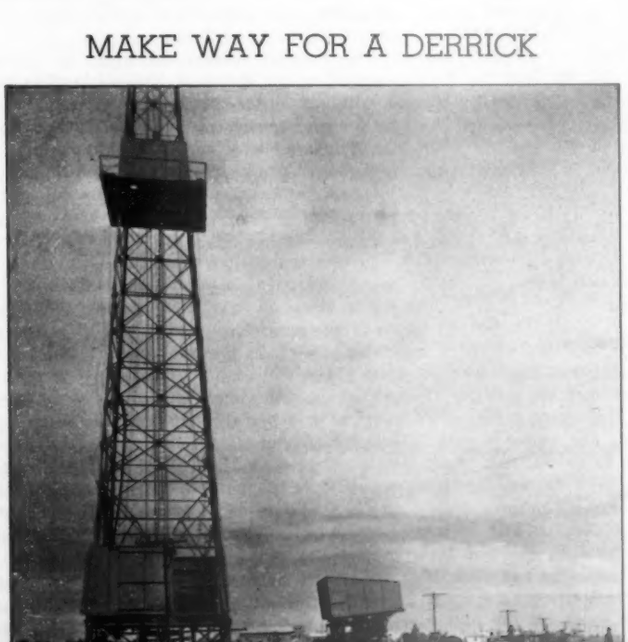
STILL LIVELY

That there still is life in the old Cement field in Oklahoma again was proved last week when, after 25 years of activity in the area, a wild 276,000,000-cu. ft. gas well blew in.

NOT ENOUGH

Advent of the vacation season, with its promise of unprecedented motor travel, imparts a cheerful tone to the gasoline market; but it takes more than tone to produce profits.

MAKE WAY FOR A DERRICK



In the Wasson field of Gaines and Yoakum counties, West Texas, the flat topography permits skidding of derricks from location to location

PUNCTURED

New Pennsylvania Legislature shows its sound sense in abolishing the oil-investigating committee of the previous administration.

HINT TO TEXAS

Chairman Cole's reasoning that the Connally law should not be made permanent until Texas enacts permanent regulatory laws is mitigated by a recommendation that it be extended for 3 years.

LOVINGTON AREA

The new Lovington oil pool in Lea County, New Mexico, is beginning to look like a sizeable area. Its largest producer to date was completed and two other wells found the pay last week.

WILL-O'-THE-WISP

Department of Agriculture expert tells investigating committee that alky-gas will be of no direct benefit to the farmer, that the benefit will go to the large growers of corn and wheat. The farmer ought to be used to political mirages by this time.

FAILURE

Federal seizure of submerged oil deposits off the California coast has been rejected by the congressional judiciary committee. The attempt to stampede Congress, which got a bill through the Senate 2 years ago, was deflated by further consideration.

WARNING

Texas returns to the 2-day shutdown, because as Railroad Commission Chairman Smith reports, "the people who wanted production on Saturday are now saying that if we do not stop Saturday production the industry will be in trouble." Illinois please note.

ESSENTIAL

"We have enough sick industries and I don't want to see the oil industry added to the list," says H. F. Sinclair, declaring the industry must get a fair price for its products if it is to continue paying wages, royalties, rentals, equipment, transportation charges and taxes.

Golden Meadows, La Fourche Parish, Louisiana, where more than 25 rigs are expected to be running on its townsite within 60 days

Drilling in Coastal Louisiana Is Reaching Record Levels

By NEIL WILLIAMS

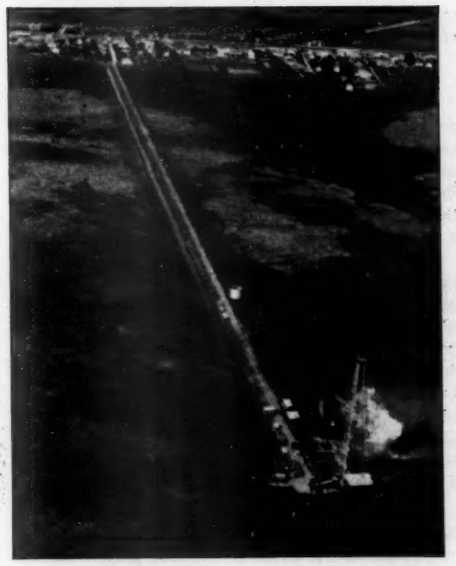
HOUSTON, Tex., May 29.—New development, getting under way or proposed, is boosting drilling in coastal Louisiana to record levels. Any slackening of work in some of the older fields is being more than offset by spread of activity to other areas and plays. That the next several months will be a period of continued expansion of operations in the district seems assured.

Approximately 140 drilling rigs, more than ever before, are now running in the district. This number represents an increase of from 30 to 35 since the first of the year, when a slight recession of activity was experienced from a previous peak in drilling reached late last summer and early autumn. Additional rigs are being brought into the district, and within the next 60 days as many as 175 rigs are expected to be in operation.

The increase in total operations is being made despite the sharp decline in work at such fields as Jennings and New Iberia, where fewer than a half dozen rigs are running. Throughout the greater part of last year intensive development of flank sands was carried on at both fields; from 16 to 18 rigs were kept busy at Jennings and 12 to 14 at New Iberia.

With the letup in work at Jennings and New Iberia there are no large local concentrations of drilling activity to boost the total of operations in the district. In no fields at present are there more than a half dozen rigs running, and in most of the fields there are not more than two or three, but by maintenance of this consistent development in these fields, and by spread of drilling to additional areas the total number of operations is being increased.

Recent proving up by Texas Co. of a new deep producing sand in completion of its No. 1 Renaudet, on the northwest side of New Iberia, is expected to cause another drilling play in that field, so that the present slackening of work there may prove only temporary. In this well, drilled to a total depth of 9,283 ft. in salt, casing was perforated for completion at 8,930-70 ft. As in the previous play in developing shallower sands closer into the dome, close offsetting may be necessary due to the numerous small, narrow tracts extending outward from the dome. Due to the greater depth of the sand, wells will not be completed in such rapid succession as in development of the shallower sands, but as many wells may be required if the production extends as generally around the dome as that of the shallower sands. A south offset to the deep-sand discovery is to be started soon by William Helis. For the test, due to the depth, this operator expects to bring in a new, large rig as present equipment in the field is not intended for such deep drilling.



Martex Oil Corp. No. 1 Falgout Holding Corp., recently completed producer adjacent to townsite of Golden Meadows, La Fourche Parish, Louisiana

The most intensive new drilling, however, is expected at Golden Meadows, La Fourche Parish, where Martex Oil Corp. has just completed a good producer on the edge of the townsite. It now is believed the townsite overlies the main part of the producing area, and in view of the numerous small tracts with diversified lease ownership in the townsite, and lack of spacing restrictions so far, a competitive drilling boom is almost certain.

Drilling permits already have been issued for more than 25 locations within the townsite, and additional applications for drilling locations are being rushed. Unless unexpected developments arise to define the field, it is anticipated that 25 to 30 rigs will be running before another 60 days. Tracts in the townsite are cut up into long, narrow strips, extending lengthwise out from Bayou La Fourche, on which the townsite is located. Many tracts are of fractional acreage size, with some as narrow as 25 to 50 ft., so locations will be close unless the tracts can be pooled, which has not been done so far, except in a few instances.

Lease to the water bed of La Fourche Bayou is held jointly by Danciger Oil & Refining Co. and William Helis, the latter having operating control. The present proposed drilling program of these operators calls for spacing of wells every 500 ft. along and offsetting the bank of the bayou adjacent to the townsite, although additional wells may be necessary to offset each of the different tracts fronting the bayou.

Of particular interest in connection with this prospective play is the depth of the production. The discovery well, Texas Co. No. 1 La Terre, a mile southwest of the townsite, completed last Decem-

ber, is producing from sand in which casing was perforated at 8,500-10 ft. The Martex well, which ran considerably higher, and which is adjacent to the townsite, was completed with perforation at 7,929-55 ft. Intensive development at such depths is expected to result in a costly development. The field will be the deepest ever developed in a close, competitive drilling play.

The Martex well is reported to have passed up two other sands, both capable of commercial production, one at 2,636-45 ft. and the other at 7,121-7,202 ft. These foretell a possible triple drilling of the townsite, which will intensify the activity.

In the Golden Meadows area, Texas Co. is attempting to make a well in its No. 1 L.L.&E., about three-quarters of a mile northwest of the discovery. It was drilled to a total depth of 12,526 ft., but plugged back to 11,810 ft. In a test of sand perforated at 10,769-71 ft. it showed salt water, but efforts are being made to squeeze this off.

Based on the showing of the Martex well, which flowed at the rate of 250 bbl. daily through small chokes, and on the character of the sands encountered, the field is expected to prove of unusually large extent and importance, which makes the townsite play practically assured.

Increased Wildcatting

The increasing activity in coastal Louisiana is reflected noticeably in wildcatting. Exclusive of extension tests, more than 35 wildcat operations are under way on widely scattered prospects. This is the greatest number of wildcats drilling at any one time in the district for several years, indicating a growing interest in exploration for additional oil reserves in that district.

Indications point to a continued increase in wildcatting during the remainder of spring and summer. In addition to the activity under way or projected in the immediate coastal region, drilling is to be started shortly on many of the numerous prospects which have been leased along the so-called Sparta-Wilcox trend bordering the coastal region to the north.

This trend, which has come into prominence largely since the opening of the Eola field, southern Avoyelles Parish, early this year, has been the scene of an intensive geophysical and leasing play. Drilling already has been launched on several prospects, which include some areas leased in previous exploration, but the major play remains for the future. With at least one test on each of the prospects, extensive drilling is assured.

A number of blocks recently taken carry drilling obligations. On at least a half dozen, tests must be started within two months. Locations and plans for drilling already have been revealed for several. Geophysical exploration and leasing continues active, and with additional prospects being found, no letup is seen in new work.

Among the wildcats due to be started shortly along the Sparta-Wilcox trend is one by M. T. Grubb and associates on a block centering around Section 82-2n-4e, north of Marksville, Avoyelles Parish. The block was taken on the strength of seismograph work, with Tide Water Associated Oil Co., Gulf Oil Corp., Texas Co. and Louisiana Land & Exploration Co. among other important leaseholders in the area. A shallow test was drilled several years ago in Section 43. The proposed test will go to the Wilcox.

The old Tanier (J. E. Boyette) prospect in the same parish has been farmed out to Perry Scranton and Charles Murphy, each of whom will start a Wilcox test before July 1. The former has taken that part of the block in Sections 32, 34, 35 and the east half of Section 31-3n-5e, and the east half of Sections 5 and 6-2n?5e. The latter has 2,040 acres in Sections 26, 27, 28, 29 and 30-3n-5e. He will go back into the old Boyette, Section 28, which was drilled some time ago by Southern Petroleum Co. to 4,510 ft., and will deepen it to the Wilcox.

C. B. Bunte is projecting a Wilcox test on a block he has just acquired from Perry Scranton centering around Sections 24 and 25-3n-2e, Avoyelles Parish. Both seismograph and torsion balance gave favorable indications. In the same parish, Koch and associates are preparing to go back into an old hole they drilled several years ago in the SE SW Section 21-2n-3e and make a Wilcox test. They will whip out around 4,000 ft. and sidetrack to a location about 1,000 ft. west of the present location.

An interesting Wilcox wildcat is to be undertaken shortly by Arkansas Fuel Oil Corp. in Rapides Parish where this company has geen closing up small leases in the Oakland Plantation area for a block centering in Sections 19 and 48-2n-1e. The Oakland Plantation proper has been under lease. This is an old Texas Co. seismograph prospect.

While no immediate drilling plans have been revealed, Sinclair Prairie Oil Co. is completing a promising block around Sections 18 and 19-1n-2e, north of Cheneyville, Rapides Parish. Gulf Oil Corp. and Texas Co. already have large lease holdings in the area, an old prospect which has taken on new importance with the Wilcox play.

Leases of the latter two companies do not expire until 1943 but it is anticipated early drilling will be undertaken.

Prospects of early drilling on the Lake Cocodrie prospect, in Township 1s-1w, on the Rapides-Evangeline Parish line, are given with Shell Oil Co., Inc., taking up state water bed leases. Texas Co. and Gulf Oil Corp. are interested in the area, an old prospect, but drilling previously has not been undertaken due largely to the fact that a large portion of the prospective area is owned by Crowell-Spencer Lumber Co., which so far has refrained from leasing.

Rapides Parish

At Glenmora, Rapides Parish, California Co. is adding to its leases to close a block scheduled for early drilling. The block centers in Sections 9 and 16-1s-2w, taking in the townsite of Glenmora. This company also is closing up a block in Sections 16, 17, 18, 19, 20, 21 and 22 and 15-1s-3w, a seismograph prospect in the same parish.

California Co. has been one of the most active participants in the Sparta-Wilcox trend play, particularly in Beauregard and Allen parishes, where it has blocked seven seismograph prospects. In Beauregard Parish, this company is drilling on a 5,000-acre selection of Long-Bell Lumber Co. land centering in the SE of Section 23-4s-9w. It also has another 5,000-acre selection block in Sections 9, 8, 7, 15, 16, 17 and 18-5s-9w and Sections 11, 12, 13 and 14-5s-10w, on which it will drill.

Bel Oil Corp. is completing a block for a Wilcox test in the Reeves area of Allen Parish. Several years ago, prior to the Wilcox play, Humble Oil & Refining Co. drilled a couple of Cockfield tests in the area, one of which blew out. In the same parish, Continental Oil Co. has taken a drilling block centering in Section 22-4s-1w. This block adjoins the Redell prospect in which Humble and Continental are interested.

One of the most interesting wildcats being started is W. T. Burton No. 1 fee, Section 32-1n-6w, Vernon Parish. This is considered one of the most promising prospects along the trend. The location is about 4 miles south and west of a test drilled some time ago by Halbouty & Chance which created considerable interest. Since that test was drilled the area has been reworked with shooting, occasioning the present location. The Burton fee property consists of thousands of acres.

The Eola field, which inspired the present intensive play along the Sparta-Wilcox trend, now has six active operations, making it one of the most active fields on the Louisiana coast. Although within the past couple of weeks the productive area apparently has been defined on the southwest, continued intensive drilling is in sight. Two additional rigs are expected to be moved in shortly to boost the number of operations to eight.

Increased activity is expected immediately in the University field, East Baton Rouge Parish, where a north extension test has run considerably higher than in the present field, and is occasioning the starting of new development in that sector. At present three rigs are running in the field, but George Echols of Houston is reported about to move in two additional rigs.

Due to the fact that much of the new drilling is in wildcat or semiwildcat exploration and development, and at steadily increasing depths, there has been a slight slackening of completions. However, with increasing development in several proved fields getting under way, the completion rate is due to be raised.

F. W. Floyd Transferred to Venezuela; R. L. Clifton Succeeds Him

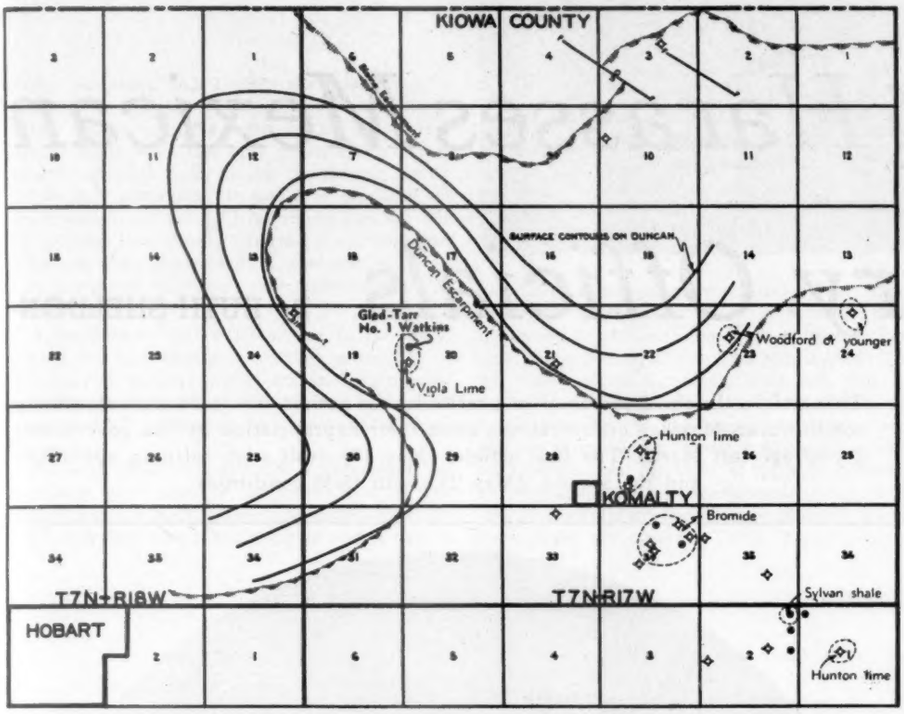
F. W. Floyd, vice president and manager of production of Carter Oil Co., is being transferred June 15 to Standard Oil Co. of Venezuela and on July 1 will take charge of operations in Venezuela. He at one time served in South America as geologist for Tropical Oil Co. in Colombia. He joined Carter Oil Co. in 1923, being successively geologist, chief petroleum engineer, assistant general superintendent and production engineer, production manager and since January 1938 vice president in charge of production.

F. W. FLOYD

He will be succeeded as general manager of production for Carter Oil Co. by R. L. Clifton who has been general superintendent and assistant to Mr. Floyd. Mr. Clifton has been with the company 22 years.

Shell Company, Inc.

VICTORIA, B. C.—Shell Oil Co., Inc., has secured a British Columbia charter with paid-up capitalization of $50,000,000 and head office at Vancouver.



Area in vicinity of Gled-Tarr No. 1 Watkins, Section 20-7n-17w; formations marked on the map were encountered immediately below the Pontotoc in drilling wells in this locality; the Duncan escarpment is shown as a significant feature

Surface Geology Led to Discovery at Hobart

By testing a prominent surface structure in southwestern Oklahoma, a recent wildcat has opened a new area with a 2,000 barrel producer at 1,055 feet.

By
RUSSELL S. TARR
and PAUL REED

Factors that were influential in reaching the decision to drill the wildcat, which turned out to be a 2,000-bbl. producer at 1,055 ft., 4 miles northeast of Hobart, Okla., were those recognized by a detailed study of the surface geology. First principles of oil geology were applied by operators undertaking the drilling of this well rather than more recent exploration techniques. The well, known as No. 1 Watkins, SW SW NW Section 20-7-17w, Kiowa County, was drilled with cable tools by Gled Oil Co., Russell S. Tarr and others on a farm-out from Shell Oil Co. Before presenting a review of results of drilling in this area, in previous years, as well as a review of the reasoning which led to the drilling of this particular well it should be said that outcrops have indicated a structure which appears to be conspicuous enough to come very near to qualifying as a "sheep herder's structure."

In the locality surrounding the well, which is approximately 12 miles north of the Wichita Mountains, wells drilled within a radius of a few miles have encountered various horizons below Permian formations. The accompanying map shows 10 wells furnishing reliable data which have gone out of the Pontotoc formation (Upper Pennsylvanian-Lower Permian) into the Woodford, Hunton, Sylvan, Viola, or Bromide. Eight miles east of the well, the Gotebo pool was opened in 1908 and in that vicinity oil production was found in several of these formations. Gotebo producers were depleted and abandoned more than 10 years ago. Two miles southwest of the well some small production was developed near Komalty. Altogether, about 250 wells have been drilled at different times in Kiowa County. The nearest commercial oil production of any importance is the Cement pool about 40 miles east.

The block immediately surrounding No. 1 Watkins was assembled by the Shell Oil Co. about two years ago as the result of a close study of surface geology. After the acreage was acquired a seismograph survey was made but results obtained have been regarded as inconclusive. A well was drilled at a location 660 ft. south of No. 1 Watkins. This was taken to 1,025 ft. with cable tools and to 1,525 ft. with rotary. A show was reported on top of the Viola. This well stopped at 400 ft. in the Viola lime, which is approximately 900-1,000 ft. thick in this vicinity. The core test to a depth of 1,120 ft. was made by the Shell Oil Co. and cores were recovered down to the upper part of the Viola; in cores from the Viola there were traces of oil and gas. The top of the Viola, in the Shell core test and the dry hole, was found to be about 50 ft. lower than in No. 1 Watkins.

With the object of drilling to the Wilcox, No. 1 Watkins was started May 1. The Viola was topped at 1,049 ft.; after drilling 1 ft. in the lime, the well flowed at the rate of 80 to 100 bbl. daily. The hole was drilled another 5 ft. and the flow of oil increased to 100 bbl. per hour. Gravtiy of the oil is reported as being 35° A.P.I. The oil is cool, indicating an absence of water near the part of the formation which has been penetrated. During the first week when steps were taken to cement the 10-in. casing, approximately 12,000 bbl. of oil flowed from the well into earthen pits.

In commenting on the geology of this locality, attention should be directed to the Duncan sandstone outcrops in the central part of Township 7n-17w which forms a very definite reentrant to the northwest, enclosing a large part of Sections 17, 18, 19, and 20. The significance of this escarpment reentrant lies in the fact that elevations on the top of the Duncan are approximately level throughout the entire course of the reentrant. The Duncan escarpment, therefore, is approximately equivalent to a surface structure contour. The actual trace of the escarpment on the ground indicates southeast dip toward Komalty; since dips exist on the Duncan in all other directions, the surface structure is at least a very flat top nose along the northwest-southeast axis in Sections 20 and 18 with a definite possibility of surface closure.

Main lines of folding in the Wichita Mountains run northwest and southeast and these axes run at a slight angle to the main axis of the mountains. As these folds head northwestward into the basin, they become less intense and generally have a greater thickness of Paleozoic beds overlying the granite.

The Wilcox sand is known to be at least 150 ft. thick in a well at SE SW Section 13-7n-16w and several other wells in this vicinity have penetrated a good section of Wilcox sand. This is considered very important because if oil can be found in the Wilcox a large per-acre yield of the central Oklahoma area may be expected.

Oil in small quantities is found in beds of Upper Pennsylvanian-Lower Permian age in several places near Gotebo and Hobart. This oil in some cases is of high gravity and in others of low gravity, and the color also varies considerably. Mostly this oil occurs in the beds above the late Pennsylvanian unconformity, although a few shows of free oil have been found in beds of Viola-Simpson age (notably Section 34-7n-17w).

Since there exists in this area a section of beds (Hunton, Sylvan, Viola, Simpson and Wilcox) comparable in most known respects with that of the producing Wilcox area, and since oil pools are found in Kiowa County, the oil most probably coming from these beds, it seemed advisable to look for a place where this section of beds is covered sufficiently to allow for accumulation of commercial oil in the Wilcox sand.

There are several porous streaks in the Viola and the entire Simpson section lies underneath. The amount of Viola that has been removed from the top of the structure is not known, nor is the exact top known, although it is suspected that it lies to the north or northwest. It seems reasonable to expect that production may be obtained in other formations below the present producing horizon.

Marketing Harasses Mexican Oil Industry Officials

By RUTH SHELDON

This article, the third and final in a series by the author, has to do with marketing conditions in Mexican oil operations since their expropriation by the government a year ago last March. The first article, (May 18) dealt with refining operations and the second, (May 25) with field conditions.

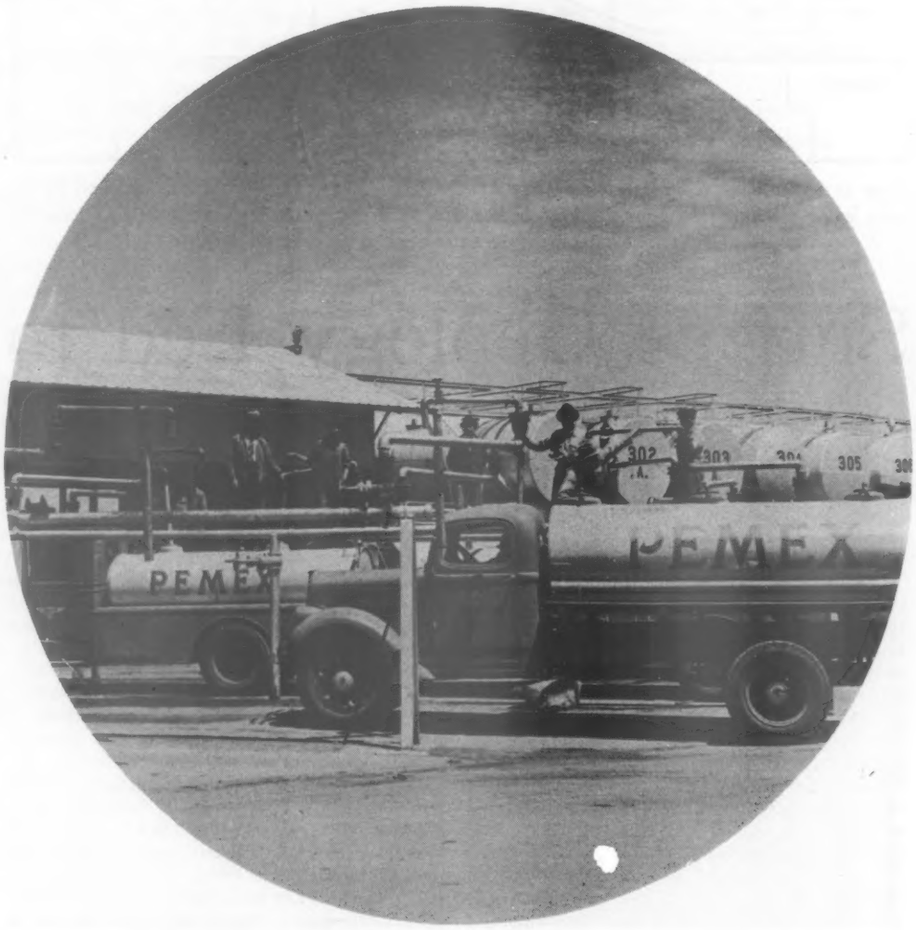
Mexico's most difficult problem since the government expropriated British and American oil holdings March 18, 1938, has been marketing the expropriated oil. From the expropriation to March 1939 the amount of oil exported was 41.4 per cent less than the oil exported by the former companies during 1937. However, exports are steadily increasing and, what is most important to Mexico, cash income is increasing.

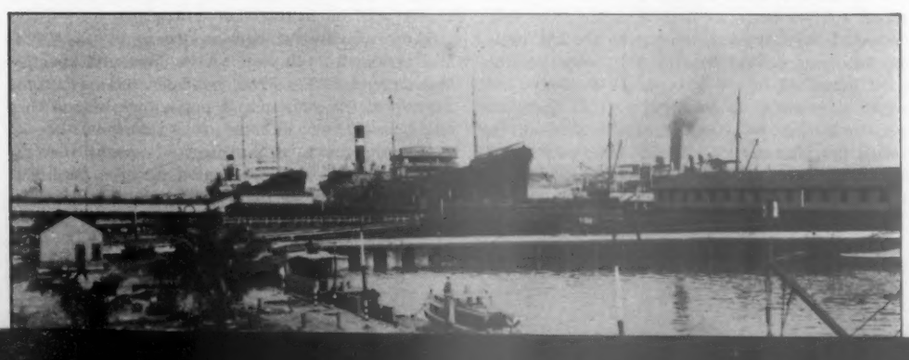
After Petroleos Mexicanos, the government oil company, was organized, Distribuidora de Petroleos Mexicanos was formed as a separate organization to handle all domestic distribution and exports. President Cardenas appointed as its head Lic. Gustavo Espinosa Mireles, a very clever and capable lawyer. Lic. Espinosa Mireles handled things through the most difficult period—the first year. Unfortunately, on May 4, 1939, he died, following an appendectomy. On May 12 Jesus Silva Herzog, professor of economics of the National Mexican university and technical advisor to the treasury, was appointed to take his place. But during the year Lic. Espinosa Mireles was general manager of Distribuidora he managed to sell, in spite of many difficulties, 12,616,951 bbl. and 56,955.74 metric tons of crude oil and refined products bringing in a revenue of $12,313,411.30, of which approximately $5,000,000 was in cash. Contracts were signed which by the end of this year will sell an additional $24,000,000 worth of products, of which approximately half will be for cash.

The principal countries to which the 12,616,951 bbl. was exported from March 19, 1938, to March 31, 1939, were: England, approximately 34 per cent; Germany, approximately 30 per cent; United States, approximately 19 per cent; and Italy approximately 10 per cent. The remaining approximately 7 per cent was distributed among Australia, Belgium, Brazil, Costa Rica, Czechoslovakia, Finland, France, Holland, Guatemala, Japan, Nicaragua, Norway, Paraguay, Peru, South Africa, Sweden and Uruguay. The largest percentage of the oil was consigned to England but it was not sold there. The only product sold to the United Kingdom was asphalt.

Immediately following the expropriation, W. R. Davis, an American who has oil interests in various countries, appeared on the scene. Within a few weeks Distribuidora had signed a contract with him. Davis has been and is at present the principal outlet for Mexican oil.

Davis instituted the now famous barter arrangements with Mexico. As one of his big markets is Germany, which is rigidly controlling foreign exchange and does not permit cash to get out of the country, the oil is sold in Germany and credit in marks is established in German banks to the account of Distribuidora de Petroleos Mexicanos. Distribuidora decides what it wants to buy in Germany and makes arrangements with the firms who collect from Distribuidora's account.





Above: Bulk storage station in Mexico City. Below, left: Ships loading at the Ciudad Madero refinery wharves at Tampico. The tanker in the foreground is the ex-Aguila "San Ricardo," now called 18 of March

The Davis contract from March 1938 to December 1938 was on a basis of 60 per cent barter and 40 per cent cash. However, the Davis contract for 1939, which is for $10,000,000, will range from 40 per cent to 50 per cent cash and any extra shipments he may want must be bought for cash. The cash percentage will fluctuate according to the products Davis can market and Petroleos Mexicanos produce.

The barter arrangement has created a great

many problems and Distribuidora has had to establish a new kind of department—a compensation department. The duties of this department are to study what Germany produces and what Mexcio needs in order to use the German credit to the best advantage. It would be simple if all the credit could be used for machinery for the oil industry, but although Germany manufactures pipe and some equipment, it does not manufacture particular machinery and replacements that are necessary.

Approximately $2,000,000 of the barter credit with Davis and Germany is being taken care of this year in refinery equipment and engineering services. The remaining $3,000,000 will be in various types of machinery and other goods from Germany.

Petroleos Mexicanos, although a government oil company, pays taxes to the government on the same basis just as the former companies did. However, Petroleos Mexicanos has paid and is paying taxes not in cash but in barter—which provides another way to use the credit. The government needs turbines, etc., in the construction of dams it is building, road building machinery and other things which Germany can supply. So Petroleos Mexicanos gives Minister of Finance Eduardo Suarez drafts on its German credit to the extent of the taxes and German machinery is bought.

The barter arrangements are not confined exclusively to Davis. For this year Distribuidora has two barter arrangements with Italy. In return for $3,400,000 worth of oil Italy is building three tankers of 10,500 tons capacity each for Distribuidora. Another contract has been signed for $1,500,000 worth of oil for which Italy will give an equivalent value in rayon yarn. In this case, the barter arrangement has been given a new twist and the rayon in reality means $1,500,000 in cash for Distribuidora. Secretary of National Economy Efrain Buenrostro, who corresponds to our Secretary of the Interior, and Finance Minister Suarez have made arrangements with Mexico's rayon manufacturers to buy the rayon and the cash which they pay is turned over to Distribuidora.

A contract with Japan will be signed shortly for $1,500,000 worth of rayon for an equivalent value in oil, and this rayon will be handled on the same basis as the Italian rayon. The $3,000,000 worth of rayon yarn is enough to supply all Mexican manufacturers for one year. The same setup in turning barter into cash for Distribuidora has been used for newsprint from Germany and Scandinavia obtained by the Davis barter contract. The compensation department of Distribuidora is carefully studying Mexico's needs for products such as these which can be turned into cash.

The only cash contracts which Distribuidora has for 1939 are with Jung of Germany for gas oil, which brings in about $225,000 per month; with Eastern States Oil Co., of Houston, Tex., which is buying 10,000 bbl. of Poza Rica crude a day; and with a Scandinavian company, which contract is being handled by W. R. Davis and varies considerably but is mostly for asphalt crudes.

Distribuidora also has a contract with Correa e Castro, a Brazilian firm. This contract is according to how much the firm can market in Brazil. The first cargo of 65,000 bbl. has already been shipped. There are other small contracts with Uruguay, Guatemala, Nicaragua, Panama, and Costa Rica. Distribuidora is paying particular attention to the South and Central America and the Antilles markets, especially in order to create and consolidate permanent trade relations. An excellent example of the methods being used is that a branch of Distribuidora, called Distribuidora Guatemalteca "Pemex," has been established in neighboring Guatemala, with a warehouse and attractive filling station. "Pemex" gasoline is advertised and sold. At present it is supplying 25 per cent of the Guatemalan demand, which is a considerable increase over Mexican products sold there by the former companies.

Immediately following the expropriation, Distribuidora was forced to sell its oil cheaper than posted prices in order to sell at all, and it is still selling for less. However, the prices at which it has sold have averaged from only 12 to 15 per cent below posted prices. There have been two exceptions. Gas oil and asphalt have always sold at the regular price and only for cash, as these are in demand.

Distribuidora has been greatly hampered in its sales to the exterior by the lack of tankers—as it owns only four. One, the ex-Aguila San Ricardo, was embargoed at Mobile, Ala., until the last of March 1939, when it was finally released by United States courts. This tanker has been rechristened "18th of March" in commemoration of the expropriation. The new tankers to be received from Italy will relieve the shipping situation to a great extent.

One of the most important things from the viewpoint of Distribuidora that will be done this year is the building of a loading terminal at Salina Cruz, on the Pacific coast of the Isthmus of Tehuantepec. Before the Panama Canal was built, the railroad running from Puerto Mexico, on the Gulf of Mexico side of the isthmus, to Salina Cruz, a distance of approximately 150 miles, received a great deal of interoceanic traffic. But the railroad and the two ports have dwindled almost into obscurity since the Panama Canal opened. For some time there have been persistent rumors that the Mexican Government contemplated building a pipe line across the isthmus, with the object of being able to supply the Japanese market. Petroleos Mexicanos does intend to build this pipe line for a number of reasons, but it is a project which will not be undertaken for a considerable time yet. For the time being it intends to build only the loading terminal and ship oil across the isthmus by rail.

The national railroads of Mexico, since they have been turned over to the workers, have been having a very difficult time operating. They are incompetently run, and they are not able to obtain enough revenue to make their operation profitable. The isthmus railroad has suffered particularly from lack of revenue, and Petroleos Mexicanos and Distribuidora de Petroleos Mexicanos, being government organizations, will be used to help out

Top of page: Ships loading Petroleos Mexicanos products at the Arbol Grande refinery (ex-Sinclair-Pierce) in Tampico. Circle, above: "Pemex" service station on the Paseo de la Reforma in Mexico City

the railroad. Oil can be shipped by this railroad for approximately 10 cents a barrel from Puerto Mexico or the refinery at Minatitlan on the Gulf of Mexico coast. This is approximately the same cost as shipping oil to the west coast of Mexico via the Panama Canal.

The important point to the government is that the railroad will be helped and that the money spent for transporting oil will stay in Mexico. Distribuidora estimates this method will eventually save money and also will put them in a position to fulfill the Japanese contract more easily. The Japanese market has been almost nothing so far, but with the signing of the contract for oil in exchange for rayon they expect it to increase. However, in order to hold a Japanese market it is necessary to increase production in the isthmus fields, which are declining, and this will be a question of a number of years. They could barge Poza Rica crude from the Tuxpan terminal to the Minatitlan refinery and then send it by rail across the isthmus, but this would increase the price, and the Japanese are not looking for expensive oil.

The new Salina Cruz loading terminal will help solve part of Distribuidora's domestic distribution problem, which is extremely acute at present. There is a shortage of fuel oil and gasoline throughout the entire republic. It is not that Petroleos Mexicanos cannot produce the products, because it can supply all of the needs of the country. Nor is it that Distribuidora lacks tankcars to ship the products to various parts of the country. The situation is a result of the condition of the railroads. The railroads, which are run by the workers, have no organization and cannot move tankcars according to schedule. As a matter of fact, Petroleos Mexicanos is contributing $20,000 a month to the railroads in an effort to straighten out the situation, but it is of little avail.

Conditions are such that the Light & Power Co. of Mexico was without fuel oil for 30 days this year because it could not obtain it from the Atzcapotzalco refinery, 15 miles away. The fuel oil was in tankcars at the refinery waiting to be shipped, but the railroads were in such chaos that they couldn't move it. Finally oil was shipped from Vera Cruz, 150 miles away by rail, and arrived in less time than it took to ship it 15 miles.

There has been even a shortage of gasoline on the Laredo-Mexico City Highway. Distribuidora has managed to juggle shipments ingeniously so that no place is without fuel oil or gasoline for more than a few days at a time. However, the Pacific coast of Mexico presents a big problem because of these conditions. Before the expropriation the Pacific coast between the states of Navarit and Sonora, which is approximately half the Pacific coast area, was supplied with oil products imported from the United States. Since the expropriation, for the first time in the commercial history of oil in Mexico, Distribuidora has succeeded in supplying this area with products. This area lies from 600 to 800 miles from Tampico on the Gulf of Mexico coast, and it takes tankcars an average of 3 months to go from Tampico to the Pacific coast and return, because of the disorganization of the railroads. So Distribuidora has found it quicker to ship the oil and products to the Pacific coast via the Panama Canal. The installation of the new Salina Cruz loading terminal will eliminate this and will enable them to transport oil and products across the isthmus by rail and barge them up the coast, which will be a quicker and more economical procedure.

Domestic consumption is steadily increasing. The increase in the republic for 1938 as compared with 1937 sales was $1,046,573.55. Distribuidora estimates it will have a probable increase for 1939 of $1,717,000. Distribuidora has been able to realize more of a profit on domestic sales than the expropriated companies at no increase in prices, not only because of the larger demand but because of the centralization of distribution and sales. It has done away with commission agents, established uniform percentages for the hire of gasoline stations and equipment, suppressed allowances and discounts which the former companies had established due to competition, and has made prices uniform. Another reason is that Distribuidora has put on a campaign to make the people familiar with the use of economical stoves by placing them within reach of the middle class, workmen, and farmers. In this way the people are beginning to burn oil products rather than wood and charcoal.

With the funds from the economies they have been able to effect they have been building new service stations and repairing old ones. The new stations which have been built have been designed from an architectural viewpoint to correspond to their localities. Distribuidora has also created a novel type of emergency service, which operates on the Laredo Highway, in an effort to induce more tourist trade. They have a fleet of small trucks carrying gasoline, standard automobile spare parts, and complete tool kits for repairs. These trucks cruise up and down to service stranded cars. They also report cars from one station on the road to another, so if a car does not arrive at a station within a reasonable time from the station where it was reported to have been, an emergency truck goes out to look for it to see what has happened to it. Another effort to stimulate tourist trade has been the creation of the "Pemex Travel Club," which sends out stickers, tags, travel information, and literature to a steadily growing list of people in the United States.

Distribuidora has succeeded in recovering several first-class markets and is making determined efforts to consolidate its prices and introduce its products to additional markets. This year's increased export program is an indication of the way in which it is establishing itself.

MEXICAN EXPORTS FROM MARCH 19, 1938, TO MARCH 31, 1939

Country—	Barrels	Metric tons*	Value
Germany	3,841,982.08	.....	$4,053,532.43
Australia	.....	21,226.28	192,298.32
Belgium	345,021.67	5,040.98	344,501.50
Brazil	55,845.29	.....	104,536.67
Costa Rica	.....	491.15	11,610.73
Czechoslovakia	.....	1,160.40	14,273.80
United States	2,433,995.38	129.50	1,872,381.65
Finland	.....	150.80	1,337.60
France	1,792.53	1,653.67	14,660.36
Holland	.....	518.81	4,534.89
Guatemala	8,249.49	.....	17,198.99
England	4,261,539.99	4,084.34	4,269,192.26
Italy	1,302,767.25	4,219.62	1,027,277.23
Japan	148,886.12	.....	68,487.62
Nicaragua	1,428.45	1,200.00	18,330.00
Norway	.....	6,027.87	53,350.90
Paraguay	503.20	.....	2,245.00
Peru	52.88	.....	361.42
South Africa	.....	100.00	950.00
Sweden	141,466.26	10,952.32	192,824.06
Uruguay	73,420.55	.....	49,525.87
Total	12,616,951.14	56,955.74	$12,313,411.30

*Barrel equivalent of metric ton will vary with gravity of product. Approximate equivalent is 7 bbl. per metric ton.

Obituaries

R. H. MORRISON, 43, formerly vice president of California-Texas Oil Co. and Bahrein Petroleum Co., returning to Standard Oil Co. of California this year, died recently while on an extended sick leave. He joined the producing department of the company in 1923 and in 1930 was made manager of the California Co., at Dallas, Tex.

THOMAS P. MELVIN, 65, former vice president of Chestnut & Smith, natural gasoline manufacturers, died at a Tulsa hospital May 26 following a heart attack. He came to Tulsa in 1911 to build the Phoenix Refining Co. refinery at Sand Springs, and remained as general manager and later became one of the organizers of the Western Petroleum Refiners Association. His first executive position in the industry was with Vacuum Oil Co. as its representative at Hamburg, Germany. He superintended construction of a large German refinery and another in Austria. Returning to the United States he was commissioned to construct the refinery of the Texas Co. at Lawrenceville, Ill., then the property of the Indian Oil Co.

KENNETH NELSON, 33, superintendent for Ray Stephens, Inc., was fatally injured May 26 in the Cement field, Caddo County, Oklahoma.

T. J. McMAHON, 56, vice president of Texas Pipe Line Co. since 1928, died at his desk in Houston, Tex., May 24. He was born December 8, 1882, at Karns City, Pa. Beginning his career in the oil industry at 17, he was employed from time to time with Producers & Refiners Oil Co. and Southwest Pennsylvania Pipe Line Co. Removing to Texas in 1908 he became an oil dispatcher in Texas Co. pipe line department. In 1917, when Texas Pipe Line Co. was organized, he became chief oil dispatcher, and in 1928 was elected vice president in addition to being operations manager. He was also a director of Texas-New Mexico Pipe Line Co., organized in 1937. Surviving are his wife; four sons, Thomas J., Jr., of Electra, Tex.; John L. of Houma, La., William J., a student at the University of Texas, and Dennis J. of Houston; four brothers, Timothy L. of Gibsonburg, Ohio, John L. of Wichita Falls, Tex., James C. of Fremont, Ohio, and Dennis F. of Tulsa; one sister, Mrs. A. L. Parrish of Mannington, W. Va.

T. J. McMAHON

JEFF MOCK, 27, former petroleum engineer with the Arkansas Board of Conservation, and Union Producing Co. and F. W. Burford interests in Rodessa, died recently at Barksdale Field, La.

G. V. D. MARX, 39, assistant chief petroleum engineer, Standard Oil Co. of California, died recently. He began work with Shell Oil Co. as a gas engineer; later being employed by O. C. Field Gasoline Corp., Signal Gasoline Co., and Phillips Petroleum Co., serving in Oklahoma and Texas. He joined Standard of California in 1925.

Automotive Engineers Stage World Congress Under S. A. E. Auspices

Dr. A. E. Dunstan, director of research for Anglo-Iranian Oil Co., Ltd., London, at the rostrum and Dr. T. G. Delbridge, head of Atlantic Refining Co. research department, seated

Abstracts of several of the papers presented at the New York automotive congress are printed on Pages 43-44

By H. STANLEY NORMAN

NEW YORK, May 30.—Experts in the production of motor fuel and lubricating oils joined automotive engineers from the United States and several foreign countries in New York last week for a 6-day discussion of common and related problems. The occasion was the first World Automotive Engineering Congress sponsored by the Society of Automotive Engineers. The European automotive and aircraft industries, particularly those of Great Britain, Germany, France, and Italy, were well represented among approximately 70 delegates from abroad registering at the congress.

Four of the sessions during the week were devoted exclusively to fuels and lubricants at which petroleum chemists and engineers, mostly from the United States, presented a mass of data on recent tests designed to bring out some particular characteristic of modern motor requirements.

After the week-long session in New York, the S.A.E. Congress group journeyed to Indianapolis where they viewed the 500-mile race classic on Memorial Day. The group continued to Detroit for inspection of that city's automobile manufacturing plants on May 31 and June 1 and 2. The swing across the country was to terminate at San Francisco with a two-day meeting on June 6 and 8.

The congress was officially opened May 22 by W. J. Davidson, Diesel engine division of General Motors Corp. and president of the S.A.E., with John A. C. Warner, secretary and general manager of the society, presiding. Alfred Reeves, vice president and general manager of the Automobile Manufacturers Association, addressed the meeting. Presentation of technical papers was launched May 22 and continued throughout the week.

T. B. Rendel, Shell Oil Co., Inc., presided at the first meeting of the Fuels and Lubricants Division at which two papers were presented dealing with Diesel fuels. In a paper by J. J. Broeze and J. O. Hinze, of the Royal Dutch-Shell's Delft laboratory, results were given on experiments with doped fuels for high-speed Diesel engines. The authors confined their discussion of results to the addition of acetone peroxide and ethyl nitrate. They reported that doping is one of the most promising methods for improving the ignition quality of Diesel fuels and for meeting certain extreme specifications found now only when intended for aircraft engine consumption.

W. S. Mount and G. A. Hope, Socony-Vacuum Oil Co., Inc., presented evidence that certain existing prejudices against Diesel fuels obtained by cracking and from other than selected stocks are largely unjustified.

One of the high points of the meeting in New York, so far as participation by oil men is concerned, was marked by the address of Dr. A. E. Dunstan, director of the research department of Anglo-Iranian Oil Co., Ltd., on "Today and Tomorrow in Petroleum." Work of the C.F.R. committee was singled out by Dr. Dunstan for commendation.

The advances in petroleum science, the extension of geology and geophysics and improvement in drilling technique were cited by Dr. Dunstan as developments which should maintain the supply of oil for many years. He also called attention to some of the secondary recovery methods such as the mining technique employed in France as a means of calling on the 80 per cent of petroleum reservoir content which is left in the formations by the present ordinary production practice.

Constant development of more accurate refining processes and the sources of petroleum other

(Continued on Page 103)

Left: In the foreground of this group discussing a paper are A. C. Beale, Wright Aeronautical Corp.; G. C. Neely, Standard Oil Co. of California and chairman of the Northern California section of the S.A.E., and William M. Holaday, Socony-Vacuum Oil Corp., Inc., New York. Behind Mr. Holaday is Count Von Soden of Germany. Right: An international group at lunch: Mrs. Jan Hajsman of Prague; Steven Rostes of Paris; Mr. Hajsman; Sandro Sirtori of Italy; Mrs. Rostes; J. A. Triska, New York, chemical engineer, Texas Co., and A. G. Cattaneo, Shell Development Co., Emeryville, Calif.

CULBERT L. OLSON, governor of California, reported opposed to Wagy bill, supported by oil men, and favorable to Atkinson bill, if amended to suit him. It is unlikely the legislature will pass either before adjournment June 10.

TEXAS

THE RAILROAD COMMISSION OF TEXAS issued an order on May 29 shutting down Texas oil fields on Saturdays and Sundays in June. The order substituted for one promulgated weeks ago, closing the field on all Sundays and two Saturdays in May and June. Chairman Lon A. Smith of the commission said the change was based on new information and to meet altered conditions.

Average production of Texas for the week ending May 27, with Saturday production included, was 1,461,989 bbl. daily, while the average for the week ending May 20, with wells closed on Saturday, was 1,285,335 bbl.

A hearing on conditions in fields will be held in Austin June 12.

"Oil has been accumulating in Texas," Chairman Smith said. "We simply are getting too much. The people who wanted the commission to permit production on Saturdays now are saying that if we do not stop Saturday production the industry will be in trouble."

THE LAND VACANCY BILL, which ranks among the most controversial measures of the current legislature, may receive final action this week, some observers believed, as warring factions appeared to be reaching an agreement. The vacancy bill had as its primary purpose giving of a "good faith claimant" the preference right to purchase any school land vacancies. Hastily drawn senate amendments to the original bill, however, resulted in its containing conflicting provisions and when passed by the house resulted in considerable confusion. To correct these conflicts, sponsors of the bill prepared a joint resolution which would authorize the enrolling clerks of the two houses to make the corrections. However, in drawing the resolution in addition to actual corrections being made, some additional changes were made that changed the meaning of the bill, one of which was bitterly opposed in the senate.

THE OMNIBUS TAX BILL passed by the house, and expected to raise $17,000,000 for payment of old-age pensions, if passed by the senate and finally enacted might create quite a bookkeeping problem for the oil industry. The bill raises existing taxes on crude oil and other natural resources, but exempts the stripper class of wells from increased taxation by a graduated-tax provision. This graduated tax, held constitutional by Attorney General G. C. Mann (p. 30, May 25 issue), places a 4-cent tax on oil produced from leases on which the wells average as much as 20 bbl. daily; 3½ cents where the average is 10 to 20 bbl.; 3 cents if the average is 5 to 10 bbl.; and 2¾ cents if the average is less than 5 bbl.

FORTY-ACRE SPACING for wells producing from the Ordovician pay in the new Apco field recently discovered in Pecos County, West Texas, was requested by the field's discoverer, Anderson-Prichard Oil Corp., at a commission hearing last week.

OKLAHOMA

NO CHANGE WAS MADE in the allowable production of Oklahoma in June by the state Corporation Commission. It will remain at 428,000 bbl. a day as recommended by W. J. Armstrong, state conservation officer.

MICHIGAN

UNDER MICHIGAN'S NEW OIL-CONTROL BILL the first emergency regulations were announced Monday. Ordered effective June 1, they establish proration in six fields and fix 10 acres as the minimum oil-drilling unit in Michigan. "Present waste and imminent danger of further physical waste" prompts the order, P. J. Hoffmaster, supervisor of wells, informed 250 Michigan oil operators. Regulations were fixed after consultation with and recommendation by the oil-control advisory board.

Proration was ordered as follows: Two hundred barrels per well daily in Van Buren County's Bloomingdale and Columbia fields, in Allegan County's New Salem field, and Kent County's Walker field; 125 bbl. per 10 acres in Clare County's Freeman field; and 250 bbl. per 20 acres in Clare County's Redding field. Mr. Hoffmaster said proration was not needed in other fields. He declared the order was in the interest of conservation and not price fixing.

The regulations order that each flowing well must be tubed immediately with 2½-in. pipe under penalty of shutting in the well. No permit for drilling will be granted unless the well is at least 330 ft. from an adjoining lease and 660 ft. from any other well.

Provision is made to protect a leaseowner's right to drill on his own property, but when permit is granted on a tract of less than 10 acres, applicant must state he refuses to pool interests with adjoining leaseowners or prove that others refused to pool with him. In such cases production will be prorated in ratio of size of tract to allowable per standard unit in that particular field.

The regulations also set up SE¼ Section 32 and SW¼ Section 33, Walker Township, Kent County, as a separate pool. Semimonthly reports of oil purchased and produced are required from prorated districts. Violators are subject to penalties up to $1,000 and 3 years' imprisonment.

STATE CAPITALS

CALIFORNIA

THE CALIFORNIA LEGISLATURE is battling against time in its efforts to enact some regulatory legislation that will permit the industry to establish rules and regulations for the curtailment of crude oil production that are legal and enforceable. According to present plans the legislature will adjourn June 10. It is doubtful whether the senate and assembly can get together, but even if they do Governor Olson has indicated he is opposed to the Wagy bill but would sign the Atkinson bill provided it is amended to suit him. All indications at the present tend to show that no regulatory legislation will become effective this year.

ARKANSAS

The Arkansas Oil and Gas Commission, at its regular monthly statewide hearing in El Dorado, considered rules for the new Lafayette County field in the Stamps area. Of considerable interest were plans for the pressure maintenance of the Jones sand in the Schuler field, Union County. Operators in the field have formed a committee to make a study of the plan, and to name an engineer to execute it in the near future. The state is requiring the installation of gas meters on all producing wells in the Magnolia field, in an effort to check gas-oil ratios and insure strict conservation.

KANSAS

KANSAS CRUDE-OIL PURCHASERS expressed a demand for 169,961 bbl. per day in June at last week's meeting of the Kansas Corporation Commission. The commission has not yet made known its allowable-production order.

ILLINOIS

THE ILLINOIS SENATE last week passed five bills "providing for regulation of oil prospecting and production and defining rights of leaseholders and royalty owners."

The bills, sponsored by Senators John J. Parish, Centralia, and William J. Conners, Chicago, would make the following requirements:

Filing of daily logs of drilling operations with the Department of Mines and Minerals.

Drilling of an additional well on each 10-acre tract adjoining a 10-acre tract in which a successful well had been drilled and covered by the same lease.

Liability and property damage responsibility of producers.

Drilling of offset wells by holders of leases adjoining property on which a successful well had been brought in.

Filing of monthly oil and gas-production reports with the state.

Payment of royalty owners in original wells amounts equal to the percentage of production of any offset wells in excess of that of the original well.

Payment of royalty owners at the posted field market price for their oil.

Senator Parish said the bills carried out recommendations on production made to the legislature by the special investigating committee headed by Representative Oral P. Tuttle, Harrisburg. All of the bills now go to the house.

LOUISIANA

The Louisiana Department of Conservation placed state allowables for the month of June at 263,023 bbl. daily, little change from that for May. In North Louisiana, Shreveport and Cotton Valley oil fields were given allowable increases, while the Lisbon field was cut.

the OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Illinois the Key

It becomes increasingly apparent that southern Illinois occupies the key position in the oil industry at present, the area, which more than any other, will determine whether there is to be substantial improvement in marketing conditions over the last 6 months of the year.

The development of new producing horizons in existing fields and promising showings in entirely new areas indicate that the possible peak in Illinois production will not be reached for some time.

That means the district, producing practically without control, will continue to strain every possible method of outlet for a period of several weeks at least, and possibly several months.

It is clear that the industry and the state will not be aided by the enactment of a conservation act comparable to those in other states during this session of the legislature. Political expediency lies in inaction rather than in joining other oil-producing states doing their part in carrying out a program of conservation that to be effective must be national in scope.

Meanwhile, conditions which have been perplexing the industry are being accentuated. Earlier calculations as to production are being exceeded, both as to the daily average output and the estimated ultimate recovery.

Any improvement must come through the action of individual operators in that area. Everyone is aware of the charges and counter-charges which have been made as to responsibility for the present unsatisfactory conditions.

As in the early days of East Texas and in other areas where operations got out of hand for lack of supervision, malpractices are inevitable when men find it necessary to protect themselves against the actions of others.

In such a situation it is impossible to place the blame on any particular group of operators. It is a general infection, not a localized disease, from which all suffer.

The main point is that there is no hope of remedy except through voluntary action by all concerned.

The contention sometimes heard that nothing can be done in the way of cooperation for fear of a Department of Justice investigation appears to be more of an excuse than an explanation.

There is no reason to feel that any government unit will look with disfavor on a program which will bring about conservation practices, assure fair and ratable takings, and place the area in position to cooperate in a conservation program which of necessity must be national. On the contrary, this should be welcome to the federal Government.

Inaction, on the other hand, may be interpreted as a fundamental weakness or inability of the industry to cope with a situation such as has developed in Illinois during the past three years and be looked upon as an excuse for federal control.

It is more than a local situation. Production has been expanding so rapidly that advantageous adjustment of transportation and marketing operations has been impossible and the section has become the controlling market factor in the industry at this time, particularly in the Mid-Continent and western areas.

Crude has been offered at prices that often have been below the posted quotations and refined products have been sold below the cost of production. This situation cannot help but be a direct threat to the markets of the entire industry.

The time has arrived when the industry, lacking state or government aid, should step in and once more demonstrate its ability to solve its own problems.

Legislation on Oil Is Washington Feature

By HENRY D. RALPH

WASHINGTON, D. C., May 29.—Oil legislation featured the activities of Congress last week with hearings opening on alky-gas and marketing divorcement bills and subcommittee reports on the Connally Act and submerged oil lands.

A recommendation that the Connally Hot Oil Act be extended only for three years has been made to the House committee on interstate and foreign commerce by a subcommittee headed by Representative William E. Cole of Maryland which held hearings on it. A bill to make the law permanent has already passed the Senate, but Representative Cole declared the federal law would not be made permanent until Texas enacts permanent regulatory legislation. The federal law prohibits interstate shipment of petroleum produced in violation of state proration orders and at present is being applied only in Texas, but that state's conservation law is not a permanent measure. It is probable the full House committee will accept the recommendation of the subcommittee.

Alky-Gas Debated in Senate Committee

The technical merits and economic feasibility of alky-gas were debated at three days of hearings last week before a subcommittee of the Senate finance committee. The committee has before it two bills to exempt alky-gas blends from the federal gasoline tax of 1 cent per gallon, the bill by Senator Chandler Gurney of South Dakota specifying a minimum of 10 per cent alcohol and that by Senator Guy M. Gillette of Iowa specifying a 7 per cent blend. Neither of the bills calls for increasing the tax on gasoline not containing alcohol, as proposed in the past, but some of the opponents expressed the fear that once Congress establishes the policy of a tax preference to subsidize the alky-gas industry a much higher subsidy may be asked in the future.

A letter was put into the record from John W. Hanes, acting secretary of the Treasury, stating the Treasury Department is not in favor of the alky-gas proposals and pointing out the loss of revenue and the expense of inspection and collection if tax-exempt alky-gas blends should come to be used extensively. The letter pointed out, however, that present prices for alcohol produced from farm products are such that the bill would probably have no effect unless conditions changed. The letter said:

"Since grain anhydrous alcohol is quoted at 85 cents, 87 cents, and 90 cents per gallon, it is clear that the 7 per cent thereof put into motor fuel in place of the 7 per cent of motor fuel removed will have a value, on the gallon basis, of from 5.95 cents to 6.30 cents. In other words, the gasoline producer will save a tax of 1 cent per gallon on gasoline of his production if he substitutes for gasoline valued at $0.00175 to $0.005075, anhydrous alcohol valued at from 5.95 cents to 6.30 cents.

"It is fair to assume that no motor fuel manufacturer would substitute expensive alcohol for cheap gasoline and thereby lose approximately 5 cents per gallon. If, however, it is found to be possible to develop cheaper methods of producing alcohol, thereby making it economically feasible to substitute it for gasoline, it is not at all improbable that motor fuel manufacturers will find it profitable to make the substitution of alcohol for gasoline and save the amount of the motor fuel tax."

A letter was also submitted from Henry A. Wallace, secretary of agriculture, stating his department does not oppose the legislation and pointing out there are serious doubts that the bill would be as beneficial to agriculture as its advocates hope, adding that the department is contemplating further research on the alcohol motor fuel subject.

Principal witnesses for the alky-gas bills were Dr. William J. Hale and Dr. Leo M. Christianson, speaking for the National Farm Chemurgic Council; William W. Buffum, of the Chemical Foundation, Inc., and Karl E. Wilkin of the Raw Materials National Council, Sioux City, Iowa. Chief opponents were George W. Barton, engineer and director of the Chicago Motor Club; Prof. H. M. Jacklin, of Purdue University, and Kirk Fox, editor of Successful Farming, Des Moines, Iowa.

Marketing Divorcement Bill Given Hearings

The marketing divorcement proposal is contained in a bill (H.R. 2318) introduced by Representative Vincent F. Harrington of Iowa which was considered at a hearing before a subcommittee of the House judiciary committee May 24. Additional hearings have been scheduled for June 2 and June 7.

The Harrington divorcement bill was supported by the National Oil Marketers Association represented by P. E. Hadlick, secretary and counsel, and by independent jobbers for members of the association. Their chief argument was that major oil companies through agreements and by reason of their integrated operations continually attempt to squeeze independent distributors out of the market. They contended independents can operate more efficiently than the marketing divisions of the major companies but that the majors are content to take a loss on their marketing activities which they recoup through profits from production, refining, or transportation. They argued that because of this situation the consumer would not suffer through enactment of the Harrington bill to prohibit an oil company from engaging in marketing at the same time it is engaged in any other branch of the petroleum industry.

The first witness was Representative Harrington himself, who declared the bill did not injure the major companies except by cutting their marketing operations loose and making them pay their way, and stated there is precedent for such legislation in the Hepburn Act divorcing railroads from coal production and the packers consent decree prohibiting meat packers from operating retail stores.

One of the jobber witnesses was Fred W. Hurley of the South Carolina Oil Jobbers Association, who charged the major companies with many unfair forms of competition against independent jobbers, ranging from lobbying in the state legislature to solicitation of jobbers' customers. He declared the majors have reduced jobbers' margins, have prevented jobbers from obtaining gasoline from independent refiners, have deliberately fostered price cutters as an excuse for lowering their own prices, and that major companies solicit the accounts of jobbers but do not compete with each other in this solicitation. The committee appeared to be much interested in Mr. Hurley's assertion that major companies trade gasoline among themselves and supply each other's accounts and that therefore branding and advertising of gasoline is meaningless.

Another witness in favor of the bill was A. C. Glenapp, representing the Iowa Independent Oil Jobbers Association, who made substantially the same points as Mr. Hurley.

One of the chief spokesmen for the bill was W. J. Kemnitzer, an economic geologist doing research work in Washington. Much of his testimony was a lengthy description of conditions in California starting with the so-called Long buying pool which was the subject of an antitrust consent decree and continuing through the N.R.A. oil code and since then through other means which he said was a conspiracy on the part of the major companies to maintain the price of gasoline and prevent the independent marketers from getting a substantial share of the business.

Two witnesses appeared in opposition to the bill and more are expected at later hearings. The first was Harry Brown, an independent refiner from Los Angeles, Calif., who declared that lower consumer gasoline prices since 1920 were due to refining improvements rather than to competition of independent jobbers. He opposed the bill on the ground it would give jobbers a legal monopoly on refinery products and said independent refiners could not operate if they were unable to sell to major companies and had to depend entirely upon the uncertainties of jobber purchases.

The other opponent was W. S. Scully, representing the Independent Refiners Association of California, who said many refiners in California have spent large amounts developing marketing facilities and promoting consumer acceptance for their brands, all of which would be junked by passage of the Harrington bill. In California, he said, the independent jobber is more or less of a peddler and could not be depended upon to supply the entire market. He admitted there are bad competitive conditions in petroleum marketing but insisted that the Harrington bill is not the proper remedy.

Submerged Oil Land Bill Is Shelved

An adverse report on the Hobbs bill to assert federal title to submerged oil lands underlying the coast of California has been recommended by a subcommittee of the House judiciary committee. It is anticipated the full committee will accept this view and that there will be no such legislation during this Congress. The proposal to claim federal ownership of petroleum lying under the ocean below the low tide mark and to make such oil deposits a naval petroleum reserve was first made in Congress a couple of years ago when a resolution by Senator Gerald P. Nye of North Dakota passed the Senate without adequate consideration of the implications. Extensive hearings were held on the Hobbs resolution earlier in the session, but the adverse committee report probably means the measure is doomed.

Net Incomes of 32 Companies for 1938 Were 46 Per Cent Less

By F. J. SANSONE
Carl H. Pforzheimer & Co.

Aggregate net income of 32 leading oil companies for the year ended December 31, 1938, totaled $337,608,469, a decrease of approximately 46 per cent from the total of $624,752,835 reported by these companies in 1937.

The sharpness of the decline partly reflects comparison with one of the most profitable periods in the oil industry's history. The decrease last year followed a period of six years of successive increases during which net earnings of 32 major oil companies rose from a deficit of $73,324,133 in 1931 to a net income of $624,752,835 in 1937, the total for which year practically equaled the earnings reported for the peak year 1929.

Gross operating revenues of the group declined 7.7 per cent to a total of $4,618,962,392 in 1938 as compared with $5,004,532,647 in 1937. The decline of 46 per cent in oil company net earnings in the face of the moderately lower dollar value of sales reflects the extent which profit margins were narrowed by the unfavorable price structure which prevailed last year.

Comparative tables will be found on Pages 90-91

The favorable trend of petroleum demand, particularly gasoline, enabled the oil industry to make a comparatively better showing in the early part of 1938 despite the generally depressed business conditions then prevailing. However, declining product prices resulting from the continued slackened demand and excessive refined product inventories gradually restricted the refiners' margin to the point where refinery operations became generally unprofitable. As a consequence, the reduction in earnings from the preceding year widened as the year advanced, the decline continuing to the close of the year when inventory and other year-end adjustments were necessitated by the general reduction in crude oil prices last October.

Cash dividends paid on the common and preferred stocks of the 32 companies included in this compilation totaled $219,107,690, a decrease of 29 per cent from 1937 when a total of $311,935,027 was distributed. In addition to the cash payments in 1938, a stock dividend was paid by one member of the group. The Standard Oil Co. of New Jersey in December 1938 supplemented its cash payment with a stock dividend of 393,372 shares which on the date of distribution had a market value of approximately $20,100,000 and which, if added to cash disbursements, would bring the total for the group to $239,207,690.

The reduction in dividend payments last year principally reflects the elimination or lowering of extra disbursements since, with but few exceptions, the regular dividend rates in effect since 1936 or longer were maintained. Furthermore, almost a third of the group paid as much in dividends in 1938 as in the preceding year. Last year the group's total of cash dividend payments was equivalent to 65 per cent of 1938 net earnings, while in the year before approximately 50 per cent of net profits were distributed. During the 11-year period, 1928-1938, this group of companies earned a total of $3,497,426,508, of which it distributed $2,453,770,640 or 70 per cent in the form of cash dividends.

TABLE 1—EARNINGS AND DIVIDENDS OF 32 OIL COMPANIES—1928-1938

	Net income	Cash dividends paid	Net income distributed (per cent)
1938	$337,608,469	$219,107,690	65
1937	624,752,835	311,935,027	50
1936	456,514,397	251,625,745	55
1935	282,449,659	132,979,607	47
1934	179,879,960	142,716,146	79
1933	102,375,294	112,295,367	110
1932	78,639,807	166,486,895	212
1931	*73,324,133	232,231,329	
1930	319,655,925	315,844,149	99
1929	626,439,240	316,869,026	51
1928	542,435,055	251,679,659	46
Total	$3,497,426,508	$2,453,770,640	70

*Deficit.

COMPOSITE INCOME ACCOUNT AND BALANCE SHEET OF 32 MAJOR OIL COMPANIES

INCOME ACCOUNT	1938	1937*
Gross Operating Income	$4,618,962,392	$5,004,532,647
Depreciation, Depletion, Etc.	529,227,166	517,447,892
Net Income	337,608,469	624,752,835
Cash Dividends Paid	219,107,690	311,935,027
ASSETS	**1938**	**1937***
Properties, Plant and Equipment	$10,410,335,232	$10,087,777,174
Reserves for Depreciation, Depletion, Etc.	5,278,890,959	5,011,504,764
Net Fixed Assets	$5,131,444,273	$5,076,272,410
Permanent Investments	721,603,502	743,800,105
Miscellaneous Assets	190,501,738	170,340,117
Current Assets:		
Cash and Marketable Securities	810,966,125	636,496,685
Inventories, Crude and Refined Oil	938,787,923	1,014,602,735
Other Current Assets	614,302,041	659,578,269
Total Current Assets	$2,364,056,089	$2,310,677,689
Total Assets	$8,407,605,602	$8,301,090,321
LIABILITIES	**1938**	**1937***
Common Stock	$3,608,337,396	$3,599,024,833
Preferred Stock	246,232,400	272,181,710
Funded and Long-Term Debt	896,648,578	650,788,109
Capital Surplus	893,057,720	906,147,920
Earned Surplus	1,482,487,468	1,421,083,961
Miscellaneous Liabilities	702,526,860	728,831,235
Current Liabilities	$578,315,180	$723,032,553
Total Liabilities	$8,407,605,602	$8,301,090,321

*Revised.

With the exception of two companies every member of the group reported lower earnings last year. However, the extent of the change from 1937 in the case of individual companies showed considerable difference. In general companies whose operations are centered in the producing branch of the industry and those companies operating on the Pacific Coast made a better than average showing, while companies largely interested in refining and marketing showed the largest declines.

Barnsdall Oil Co. and Texas Pacific Coal & Oil Co., with gains of 49 per cent and 5 per cent respectively, were the two companies reporting increases, while some of the other smaller companies showed relatively moderate declines. Losses of from 3 to 12 per cent were recorded by Lion Oil Refining, Houston Oil Co. of Texas, Standard Oil of Kentucky, Plymouth Oil and Pacific Western Oil Corp.

Other companies showing a less than average decline were Humble Oil & Refining, Seaboard Oil, Standard Oil of Kansas, Socony-Vacuum, Standard Oil of California, Amerada Petroleum and Tide Water Associated Oil Co. These companies reported decreases ranging from 23 to 34 per cent. *(Continued on Page 89)*

Investigation by California Grand Jury Will Begin on June 2

LOS ANGELES, Calif., May 29.—After a day of intensive questioning, a federal grand jury was selected by Paul J. McCormick, presiding judge of District Court 8 in Los Angeles, to investigate alleged monopolistic practices in the marketing of petroleum products in Pacific Coast territory. The grand jury will begin its investigation at 10 a.m. June 2. The special inquisitorial body of 23 men, selected from a group of 300, was sworn in May 26 and Judge McCormick appointed H. R. Annin, an engineer, as foreman.

Before anyone was placed in the box, Joseph E. Brill, special assistant to the attorney general, read a long list of companies, individuals and associations which might become involved in the investigation or become witnesses. Many of those summoned for jury duty had business dealings or were personally acquainted with some of the individuals and were excused. Mr. Brill indicated the investigation would probably last about three months and meetings will be held from two to three days a week.

The Government's case will be presented by Mr. Brill and M. S. Huberman, special assistants to the attorney general, assisted by Harry McClernan, Laurence P. Sherfy, and Robert Marquis.

A feature in the selection of the jury was that special attention was given to the determination of the value of circumstantial evidence. Only those jurors who stated that circumstantial evidence would warrant the bringing in of indictments were retained. Some of the evidence to be presented to the grand jury will include findings of the Federal Trade Commission as well as facts and data collected by Department of Justice agents. The Federal Trade Commission launched an inquiry in 1936 at the request of the attorney general to determine whether California companies were complying with the 1930 consent decree. After receiving the commission's report, never made public, the Department of Justice instituted an investigation which produced the evidence which will now be presented to the jury.

H. F. Sinclair Believes Public Will Pay Fair Prices

NEW YORK, May 29.—H. F. Sinclair, chairman of the executive committee of Consolidated Oil Corp., in a statement issued Saturday, supplemented his remarks to stockholders last week when he said he believed a cut in crude oil prices could and should be avoided by better prices for finished products.

His latest comment referred to statements made to stockholders by John A. Brown, president of the Socony-Vacuum Oil Co., Inc., to the effect that the industry is not receiving prices for finished products commensurate with the cost of crude oil, but that better prices for products could not be realized just now.

"The picture is a discouraging one," Mr. Sinclair said. "Here is an industry that has not, like some others, suffered from lack of demand for its products. It contributes more than $4,000,000,000 a year to the national income in the form of wages, royalties, rentals, equipment, transportation charges and taxes. Its payroll alone is $1,500,000,000 a year. How can such expenditures he continued unless we receive a fair price for our products?

"I believe the public is willing to pay a fair price in order that the industry may be able to continue its contribution to national prosperity, provide the enormous amounts of new money that are required, meet its wage bill, pay its stockholders a reasonable return on their investment, and give those who produce its raw material what crude oil is really worth.

"We have enough sick industries, I don't want to see the oil industry added to the list."

Texas House Quickly Rejects Federal Control Hint

AUSTIN, Tex.—A resolution offered by Representative Hull, Fort Worth, that was assailed as a step towards federal control of the oil industry, was buried by the house in the committee on oil and gas.

The resolution asked that the legislature petition President Roosevelt to approve reasonable agreements among the various states affecting the price of crude oil and refined products, because sale of petroleum products below cost causes economic insecurity, loss of employment, detriment to all concerned, and because fears are now entertained as to the stability of the oil industry through lack of assurance of fair return on invested capital.

Representative Anderson, San Antonio, told the house it was a step toward federal control.

Mid-Continent Strike Hearing Continues

Conferences have been held by attorneys for Mid-Continent Petroleum Corp. and Oil Workers International Union for devising means for shortening the hearing conducted by National Labor Relations Board in Tulsa. Trial of strikers charged with directing a riot in West Tulsa was set for June 19 in District Court, Tulsa.

THE MARKETS*

CRUDE OIL: *Action of the Texas Railroad Commission in ordering a two-day shutdown each week allays some of the uneasiness concerning likelihood of price cuts. Overproduction in Illinois continues to be a cause of worry.*

REFINERY: *Gasoline increasingly firm under the influence of rising consumption and substantial withdrawals from stocks. Decline in demand for heating oils offset by purchases for fall use. Naturals fairly steady in interior areas, but off on West Coast. Wax strong.*

TANK-WAGON AND POSTED DEALER: *Standard of Indiana brought gasoline and kerosene prices to normal levels in Wisconsin. Reductions follow lower freight rates in Standard of New Jersey territory.*

FINANCIAL: *Oil shares failed to keep step with some other divisions of the stock market. Average of 30 representative stocks for week ending May 27: High, 25.69; low, 24.43; close, 25.40. Week ending May 20: High, 25.10; low, 24.18; close, 24.66.*

**Detailed information in market section.*

Members of Oil Company Buyers Group and guests who attended session at Fairmont Hotel, San Francisco, May 23

The Oil Company Buyers Group of the National Association of Purchasing Agents held a meeting on Tuesday, May 23, at the Fairmont Hotel, San Francisco, during the Purchasing Agents annual convention. Two subjects were considered. One of these was the report on and review of the simplification program of sizes, weights, and grades of oil-country tubular goods as adopted at the St. Louis meeting in 1938. The other was a discussion of the cost of extra inspection of tubular goods as voiced by several California members of the group. Reports on the simplification program definitely show that large savings have accrued to the consumer companies by following the outlined plan. It was agreed that efforts in this respect be continued. Later in the year a review and summary will be compiled.

California operators claim to be having considerable difficulty with casing threads. E. W. Beck, manager of purchases of the General Petroleum Corp., Los Angeles, presented a paper on this subject. The difficulties encountered in that locality apparently are due to the greater depths which casing must be run. Manufacturers say that complete and thorough inspection is given to all tubular goods made by them, which should be satisfactory in all oil fields. A committee of three members is to be appointed by O. E. McClatchey, group chairman, who was reelected, to study this subject and report back to the group.

The final session of the N.A.P.A. was presided over by H. M. Cosgrove, executive manager of the Purchasing Agents Association of Tulsa, in compliment to the work of that group.

Thomas D. Jolly, Aluminum Co. of America, Pittsburgh, Pa., was elected national president.

William L. James, purchaser for Stanolind companies, Tulsa, assumed the duties of vice president of district No. 2, which includes Oklahoma, Texas and Mexico.

INTERNATIONAL

Rumanian Output Continues to Show Declining Trend

Rumanian oil production for March and for the first 3 months of 1939 continues to show the declining trend of 1938. The oil production in March 1939 is estimated at 525,000 metric tons (approximately 3,927,000 bbl.) compared to 570,000 metric tons for the same month last year (about 4,263,600 bbl.). Aggregate production for the first quarter of 1939 is estimated at 1,550,000 metric tons, or 11,594,000 bbl., compared to 1,860,000 tons or 13,912,800 bbl. for the same 3 months last year. At the rate for the first 3 months, the annual crude oil output from Rumania for 1939 would be 6,200,000 tons or about 46,376,000 bbl., compared to yield of 53,505,000 bbl. during 1938.

The following table shows the production of the principal companies during the first 3 months of 1939, compared to the corresponding period for 1938:

Company—	Production in metric tons— 1938	1939	Difference
Astra Romana	345,682	337,923	−7,759
Concordia	209,786	213,842	+4,056
Steaua Romana	184,449	167,322	−17,127
Romano-Americana	228,562	192,607	−35,955
Unirea	170,454	137,129	−33,325
Colombia	79,888	133,479	+53,591
Prahova	78,295	83,096	+4,801
Creditul Minier	102,536	78,464	−24,072
Industria Romana de Petrol	45,722	40,004	−5,718
Foraky Romaneasca	16,643	17,150	+507
Grupul Petrolului	30,346	23,700	−6,646
Dacia Romana	15,015	14,552	−463
Petrolifera Romana	11,493	8,002	−3,491
Redeventa	7,078	7,093	+15
Others	128,051	95,637	−32,414
Total	1,654,000	1,550,000	104,000

Colombia Output Up, but Peru Down, Continuing Trend

The upward trend of production in Colombia and the declining curve in Peru were continued in April. From a daily average of 57,790 bbl. produced by Tropical Oil Co., International Petroleum Co., Ltd., subsidiary, in Colombia in March the rate was increased to 59,968 bbl. in April to total 1,799,040 bbl. for the month. In April 1938, Tropical's Colombian production totaled 1,616,684 bbl., or a daily average of 53,889 bbl.

International's production in Peru last month totaled 934,319 bbl., or a daily average of 31,114 bbl., compared to 31,965 bbl. daily in March. In April 1938, International's production totaled 1,081,263 bbl., or a daily average of 36,042 bbl.

For the first four months this year, Tropical Oil Co. produced 6,887,923 bbl. of oil in Colombia, an increase of 227,989 bbl. over the total of 6,659,934 bbl. produced in the same period last year.

International produced 3,879,300 bbl. in Peru during the first four months of this year compared to 4,459,217 bbl. for the same period in 1938, a decline in 1939 of 579,917 bbl.

In addition to International's production in Peru, Cia. Petrolera "Lobitos" and Establecimiento Industrial de Zorritos have combined production of about 7,100 bbl. daily raising the total current output from that country to approximately 38,250 bbl. daily.

U.S.S.R. Exploration Being Centered in Ural-Volga Basin

Russian petroleum exploration and exploitation efforts during the next five years are to be concentrated in the basin comprised between the southern slope of the Urals and west of the Volga, according to the current issue of International Petroleum Trade released last week by the Bureau of Mines. The third five-year plan calls for production of 2,000,000 metric tons of oil, about 14,000,000 bbl., during 1939 from the Ural-Volga basin with successive increases up to 7,000,000 metric tons, or 49,000,000 bbl., by 1942.

Concentration of exploration and exploitation in the interior section of Russia calls attention to the comparatively remote location of the country's Caucasian petroleum reservoirs. The Caucasian fields of Baku, Grozny, and Maikop are on the southwestern edge of the U.S.S.R., remote from most of the cities and collective farms which are the main points of consumption. Movement of Caucasian oil to the interior points of major consumption involves long hauls by rail.

Viewed from a standpoint of national defense, the Caucasian fields are in an exposed position. An enemy air force based in Rumania, for example, would be only 500 miles from Maikop, 800 miles from Grozny, and 1,000 miles from Baku, comparatively insignificant distances gaged by modern range of aircraft.

The area in which production and refining facilities are scheduled for major expansion is bounded by a triangle linking Saratov, Perm, and Orsk. U.S.S.R. geologists estimate the area to contain reserves totaling approximately 156,000,000 metric tons, or more than 11,000,000,000 bbl.

Drilling in the Ural-Volga basin began in 1929 at Ishimbayevo, in Bashkiria. The production from this district increased from 34,000 metric tons in 1933 to 1,500,000 tons in 1938. About 200 wells are at present being operated. Production from the fields in this basin at Kama, Ishimbayevo, and Buguvuslan is reported to yield approximately 50 per cent gasoline by modern refining methods.

The first section of the U.F.A. refinery within this territory was placed in operation in 1938 and plans call for installation of two more units this year and in 1940.

Press dispatches from Moscow also report that construction is under way on new refineries at Syzran and Buguvuslan.

Crude and Refined Exports from Aruba And Curacao, D. W. I.

Crude-oil and refined-petroleum exports from Aruba and Curacao, the Dutch West Indies points harboring two of the world's largest refineries, totaled 22,137,205 bbl. during the first 2 months of 1939 Exports from Aruba totaled 12,275,980 bbl. during the 2 months and out of this aggregate fuel-oil shipments accounted for 6,721,000 bbl. Motor fuel was the next largest item of exported petroleum followed by Diesel oil, gas oil, kerosene, and lubricating oil in the order named.

Petroleum exports from Curacao during the first 2 months of this year aggregated 9,861,225 bbl. Fuel-oil shipments accounted for 6,061,780 bbl. of the total, followed in importance by crude oil, gasoline, gas oil, Diesel oil, lubricating oil, and kerosene.

Details of shipments from the islands during the first 2 months of the current year follow:

ARUBA EXPORTS

Product—	January	February
Kerosene	369,440	351,350
Fuel oil	3,734,232	2,986,768
Gasoline	1,076,071	1,075,184
Gas oil	285,129	723,659
Diesel oil	933,576	740,411
Lube oil	9	151
Total	6,398,457	5,877,523

CURACAO EXPORTS

Product—	January	February
Kerosene	30,706	46,119
Fuel oil	3,242,912	2,818,868
Gasoline	720,125	754,595
Gas oil	339,534	331,125
Diesel oil	372,853	296,947
Lubricating oil	72,429	53,608
Crude oil	409,123	372,281
Total	5,187,682	4,673,543

Trinidad Output Nearly 15 Per Cent Above Last Year

Crude oil production in Trinidad tapered off slightly in April compared to March. The daily average output during April amounted to 52,310 bbl. compared to 52,606 bbl. in March. The rate of production this year, however, remains at a substantial margin above the 1938 record. In April 1938, the production in Trinidad totaled 1,418,825 bbl., or 47,294 bbl. daily against total of 1,569,298 bbl. for the same month this year. Recovery for the first four months of 1939 totaled 6,351,696 bbl., an increase of nearly 15 per cent over the accumulative of 5,540,101 bbl. for the same period last year.

Natural Gas News

Columbian Carbon Company Pipe Line Division

Columbian Carbon Co. owns and operates 913 miles of 1- to 6-in. pipe lines. F. F. Curtze is president; Reid L. Carr, vice president and secretary; Arthur J. Sittig, controller; George L. Bubb, treasurer, and James P. Shea, assistant treasurer. The general superintendent is H. H. Reardon, Monroe, La.; West Virginia superintendent, O. W. van Petten, Charleston; gasoline plant superintendent, W. E. Reardon, Monroe, La.; Texas superintendent, Dan Glaxner, Pampa; superintendent land and lease department, Rodney A. Cover, New York; Kentucky field superintendent, Bee Whitis, Prestonburg; Louisiana field superintendent, V. F. Sackett, Monroe; superintendent southern gas line, A. V. Miller, Monroe, La.

Gas Utility Revenues Gain For First Quarter

Manufactured and natural gas utility revenues amounted to $248,449,900 for the first three months of 1939, compared with $232,750,800 for the corresponding period of 1938, an increase of 6.7 per cent, it was announced by Paul Ryan, chief statistician of the American Gas Association.

The manufactured gas industry reported revenues of $98,995,400 for the first quarter, an increase of 3.4 per cent from the same period of the preceding year. The natural gas utilities reported revenues of $149,454,500, or 9.1 per cent more than for the first three months of 1938.

Total sales of manufactured gas for the first quarter were 102,022,400,000 cu. ft., an increase of 5.3 per cent. Natural gas utility sales for the period amounted to 391,289,300,000 cu. ft., an increase of 9.9 per cent.

Manufactured gas sales for domestic uses, such as cooking, water heating, refrigeration, etc., were 0.7 per cent above the same period of 1938. Sales for house heating purposes gained 12.6 per cent, while commercial uses gained 5.5 per cent and industrial uses increased 13.4 per cent.

Natural gas sales for domestic purposes showed an increase of 10.7 per cent while industrial sales gained 9.0 per cent.

Louisiana Protests Rates of Two Gas Companies

WASHINGTON, D. C.—The Louisiana Public Service Commission has asked the federal Power Commission to participate in a joint investigation of rates the Interstate Natural Gas Co., and United Gas Pipe Line Co. charge for natural gas.

The Louisiana Commission contended Interstate made "unjust and unreasonable" charges to public utilities and municipalities, and that United charged other utility companies "excessive and discriminatory" sums, in comparison with other rates, particularly for domestic consumers.

Both firms, the state commission said, had questioned its jurisdictions.

Sour Gas Allowable Set for Panhandle

An order issued by the Texas Railroad Commission has fixed an allowable of 690,000,000 cu. ft. daily for sour gas production in the Texas Panhandle field from June 1 to September 1, 1939.

Carbon Black Industry Had Unsatisfactory Year

Compared with 1937, domestic sales and exports of carbon black in 1938 declined 20 per cent and 9 per cent, respectively, the Bureau of Mines reports. Prices fell to unprecedented low levels. Although production was curtailed, stocks at plants increased substantially.

Prices had weakened at the end of 1937 and two additional cuts were made in January 1938, bringing the price to below 3 cents a pound, the generally accepted production cost. The average value at the plant as reported by producers declined from 3.41 cents in 1937 to 2.41 cents in 1938. The average export value was better maintained, but it dropped from 4.72 cents in 1937 to 4.51 cents in 1938.

The decline in output was quite general throughout the production states, Oklahoma being the chief exception. Louisiana's output dropped 40 per cent while Texas nearly held its own. Production in the Texas Panhandle dropped in 1938 for the first time since 1932, but a material gain was reported in West Texas.

Total sales in 1938 were 411,442,000 lb., or 16 per cent less than in 1937. Domestic sales totaled 243,474,000 lb., or 20 per cent less than in 1937. Exports, after increasing for three years, declined to 168,000,000 lb., compared to 184,000,000 lb. in 1937.

Gas Allowables Set For Kansas Fields

WICHITA, Kans.—May gas allowables of 545,000,000 cu. ft. for the 57-well Otis field of Barton and Rush counties and 279,000,000 cu. ft. for the five-well Lyons pool of Rice County were announced by T. A. Morgan, oil and gas conservation director of the Kansas Corporation Commission.

Refinery Expansion

Standard of Louisiana Safety Record Reviewed

A remarkable record of progress made in accident prevention at a large petroleum refinery at Baton Rouge, La., is presented in a report recently issued by the Bureau of Mines. The report reviews the long record of first-aid training of the employes of the plant and the formation, duties and activities of the safety department and various safety committees. It also describes safety meetings, first-aid contests, Holmes safety chapters, safety and company publications, safety advertising, bulletin boards and safety equipment.

As a result of some of these activities three lives have been saved by artificial respiration in the plant and a number of others outside the plant; five employes have been awarded the president's medal of the National Safety Council; and a number of employes have received certificates of honor from the Joseph A. Holmes Safety Association. In 1938 the Joseph A. Holmes Safety Association awarded a certificate of honor to this plant for having operated through the year 1937 with an accident frequency rate of 3.08 and a severity rate of 0.239 in the performance of 7,453,730 man-hours of work.

Copies of this report, Information Circular 7059, "Safety at the Baton Rouge Refinery, Standard Oil Co. of Louisiana," by Eric B. Brown, may be obtained free of charge from the Bureau of Mines, Washington, D. C.

Johnson Oil Supply Co. Building Gary Refinery

CHICAGO.—Newest oil refinery for the Chicago region is a skimming plant being built at Gary, Ind., by Johnson Oil Supply Co., which has conducted an oil jobbing business there for years. The plant, constructed in part of equipment from an East Texas field plant, is expected to be completed in 10 days and will have a crude capacity of 1,000 to 1,500 bbl. daily. Location is around 2500 West Ninth Avenue, adjacent to the company's present headquarters. Thomas Johnson is president of the company, which expects to operate the plant on either Illinois or Michigan crude. Williams Petroleum Co., Chicago, will market that portion of the company's products not required for its own use, including gasoline, kerosene, distillate, gas oil and fuel oil.

Special Master Appointed In Gray-Danciger Case

AMARILLO, Tex., May 29.—Robert A. Stone has been appointed Special Master by Federal Judge James C. Wilson in the case of Gray Processes Corp. versus the Danciger Oil & Refining Co. The trial was one of the longest ever held in federal court here. The official record of the case contains more than 3,000 pages. More than 100 exhibits were introduced as evidence in the case. The hearing of the testimony and arguments in the case continued more than six weeks.

Shell Will Move Hammond Plant

ST. LOUIS, Mo.—Shell Oil Co., Inc., is planning to move its Hammond, Ind., refinery to Wood River, Ill., near St. Louis, according to reliable information. Bulletin board announcements have informed the 800 employes of the impending change but the exact date has not been set.

Transfer to the refinery activities is part of a broad integrating plan which will involve savings in transportation costs.

Shell Oil Co., Inc., is a subsidiary of Shell Union Oil Corp., which has total assets and liabilities of $380,000,000, according to the consolidated balance sheet, and a gross operating income of $250,000,000 a year.

The plans for the removal of the refinery also include the conversion of the present Hammond plant into a terminal distributing point for gasoline.

Glacier Production Co. Installs Perco Sweetening System

BUTTE, Mont.—Glacier Production Co. announces the completion of a license agreement with Perco, Inc., Bartlesville, Okla., whereby a 2,000-bbl. per day capacity Perco copper sweetening unit will be installed at its Cut Bank, Mont., refinery, which is now under construction. The unit will be the so-called liquid process design and will be in operation on or about June 1. Glacier Production Co. will process Cut Bank crudes.

Refinery Nearing Completion At Kilgore, Tex.

KILGORE, Tex.—Model Oil & Refining Co. is nearing completion of its new $150,000 plant at Kilgore which, when finished, will provide the city territory with three refineries and three gasoline plants. The Model unit will have a capacity of 2,500 bbl. daily.

Appeal to Be Taken in Ethyl Gasoline Case

NEW YORK, May 30.—Appeal probably will be taken from Federal District Judge Bondy's decision holding Ethyl Gasoline Corp. jobber licensing system in restraint of trade as soon as the formal decree is entered.

In his decision handed down last week, Judge Bondy held that the Government had not made a clear case of price maintenance and that "its (Ethyl) pecuni-

ary interest, if any, in the market and price policies of the jobbers selling gasoline is obviously very remote."

The court held, however, that the practice of Ethyl and its refiner licensees restricting the sales of treated gasoline to those jobbers only whom the former licenses unreasonably restrains trade and is violative of the Sherman antitrust act.

The Government's price maintenance argument, the court decided, was a permissible but not a necessary conclusion. Since the case could be disposed of on the grounds of restricting sales by refinery licensees only to licensed jobbers the court elected to pass up the price question. Judge Bondy agreed to enjoin the defendant company in this language: "The defendants accordingly will be enjoined from requiring jobbers to procure licenses for handling lead-treated gasoline and from requiring refiners to sell lead-treated gasoline to such jobbers only as defendant corporation licenses or otherwise designates."

Restriction of sale of lead-treated gasoline on the part of refinery licensees only to licensed jobbers has been included in all Ethyl Gasoline Corp. contracts since it started business.

The injunction decree will be drawn soon by the Government and submitted to the court for execution at which time the appeal to a higher court will be in order.

Refinery to Be Built At Sandoval, Ill.

SANDOVAL, Ill.—The Wabash Refining Co. will build a 750-bbl. capacity refinery here, on the Baltimore & Ohio Railroad, it has been announced. The company has been given necessary permission by the village board.

Cordova Gathering System And Clay Refining Co.

FORT WORTH, Tex.—W. R. Skeen of Tyler has taken over Cordova Gathering System from Arch Price and Clay Refining Co. from Dick Duncan. He will operate the gathering system under its original name and the Clay plant under the name of Tyreco Refining Co., as sole owner.

Sinclair to Remodel Sand Springs, Okla., Plant

The usual July vacation shutdown period will be utilized by the Sinclair Refining Co. at its Sand Springs, Okla., plant to replace several major obsolete units. The work will require approximately 6 weeks' time and will begin about the middle of June.

Canadian Pipe-Line Rate Cut Is Recommended

CHATHAM, Ont.—A report issued by Justice A. C. McGillivray and Major L. R. Lipsett, commissioners appointed to inquire into the oil situation in Alberta, recommends reduction of the pipe-line rate from Turner Valley to Calgary from 15 cents to 9½ cents a barrel, and reduction of the rate for loading from the pipe line into tankcars at the Calgary terminal from 5 cents to 2½ cents. Recommendation is also made that a service of loading tank trucks be provided at 2½ cents.

The report estimates the life of the Turner Valley field at 18 years from January 1, 1939, based on a throughput of the pipe-line system of 6,000,000 bbl. a year. Imperial Oil, Ltd., and Royalite Oil Co. would be common carriers under control of the Board of Pupblic Utility Commissioners of Alberta. It is recommended that a new accounting system be set up by these companies with separate records to cover pipeline operations.

British American Oil Co. has a service pipe line connecting its refinery with the Royalite trunk pipe line, and recommendation is made for a similar line to serve the Lion Oils refinery at Calgary, operation of this service line to be included in the 9½-cent rate.

Pipe Line Activity

Laying eastern gas line

Receiver Appointed for Atlas Pipe Line Corp.

SHREVEPORT, La.—Atlas Pipe Line Corp. of Shreveport underwent a change in officer personnel last week as a result of the release of the option which Lion Oil Refining Co. of El Dorado has held on a controlling interest in Atlas stock since last year. At a stockholders meeting called in Shreveport, former officers nominated by Lion retired and the new officers were named for 1 day only then a temporary receiver, H. K. Phelps, Jr., cashier of the First National Bank of Shreveport, was named; B. F. Connolly will be general manager of the company. Operations will continue at the refinery. The court order appointing the temporary receiver authorized him to conduct business as a going concern, without liquidation of properties. The permanent receiver may be named June 19; Atlas Pipe Line Corp. is the company in receivership and not Atlas Oil Corp.

Pipe Line Earnings Show Drop in First Quarter

WASHINGTON, D. C.—The Interstate Commerce Commission reports that 41 large pipe line companies had a total transportation revenue of $48,824,573 in the first quarter of 1939. This compared with total revenue of $54,745,730 for the first quarter of 1938.

These companies handled 264,031,237 bbl. of oil in the first three months of this year, compared with 274,201,982 in the like period of 1938.

Oklahoma Stripper Owners Against Line Divorcement

Directors of the Oklahoma Stripper Well Owners Association are unitedly against the Borah pipe line divorcement bill introduced in Congress. After a prolonged discussion of the proposal, Pres. William A. Goforth and Sec. Charles E. Clowe were authorized to draft a resolution to that effect.

"Pipe line divorcement would be disastrous to the oil industry," the resolution states. "First, it would lose permanent markets that stripper well owners are enjoying. Second, it would create waste and loss of oil reserves, through the abandonment of little wells. Third, it would increase unemployment. Fourth, it would result in loss of permanent investments."

Texas-New Mexico Co. Lets Lovington Line Contract

FORT WORTH, Tex.—Texas-New Mexico Pipe Line Co. has awarded to Carlson Construction Co. of Pampa contract for laying 16 miles of 5½-in. o.d. line from the Lovington pool southeast to the Monument station. The line will have a capacity of 6,000 bbl., and construction is scheduled to start within 10 days.

Natural Gasoline

Warren Petroleum Co. Opens New Plant

The first gallon of gasoline came through the Warren Petroleum Corp.'s new natural gasoline plant at Fairbanks, Tex., Thursday afternoon with President W. K. Warren and Sales Manager S. I. Hulse there to see the initial production. F. E. Thompson, formerly superintendent of the Bangs, Tex., plant, and more recently in charge of East Texas butane operations, is plant superintendent.

Two months ago shipments of material began to move to the new plant site, and construction work was begun. The approximate cost was $300,000.

Located 10 miles northeast of Houston, the plant is in the Fairbanks field of Harris County, Texas. Initial production will be approximately 12,000 gal. per day of 26-lb. material, and will be increased to 25,000 gal. with the gradual addition of new wells to the plant. The present gas volume to be processed is 20,000,000 cu. ft. daily.

The gas will be taken from about 200 wells, and will operate on well pressure for a period of approximately 2 years. At the end of the 2-year period compressors will be added.

All of the pumps in connection with the gasoline plant are driven by low-pressure gas turbines operating at approximately 30 lb. The steam installation consists of four 125-hp., 300-lb. working pressure boilers.

Most of the output of this new plant will be moved by rail to Houston for delivery to foreign countries. The Warren Petroleum Corp. already has terminal facilities at Norsworthy and Port Arthur, Tex.

Fifteen men will be required to operate the plan, according to H. W. Harts, general superintendent of natural gasoline plants.

Recycling Considered For Schuler Field

EL DORADO, Ark.—Companies operating in Schuler field of Union County will retain an engineer to recommend a method for recycling by which ultimate recovery may be increased 15,000,000 to 18,000,000 bbl. Engineer will be selected by J. S. Rushing, Alice Sidney Oil Co., O. G. Murphy, Marine Oil Co., and C. H. Murphy, Jones, Murphy & Hurley. It is also believed by operators that recycling will cut lifting costs and postpone installation of pumping equipment. Lion Oil Refining Co. and Phillips Petroleum Co. are largest operators in Schuler field.

Ambassador's Statement On Chilean Oil Policy

WASHINGTON, D. C., May 29.—Ambassador Cabero of Chile said today that if his government takes over the distribution facilities of foreign oil companies, he was sure compensation would be made. "Chile always has met her obligations," he said.

Programs and Meetings

Oil Belt Safety Council Year Round Program

FORT WORTH, Tex.—An arrangement for the 5-year-old Oil Belt Safety Conference to serve on a year-round program was effected by the directors during the recent annual meeting in Abilene, Tex. The name of the body was changed to the Oil Belt Safety Council and the directors selected Abilene as headquarters, and Brownwood was named host city for the 1940 conference.

The directors adopted a 12-point program of work for the year. Every incorporated town and city in the Oil Belt Safety Council territory is asked to select a representative, safety-minded leader to serve on the board of directors of the council. The first meeting of the board will be held in Breckenridge, June 19.

The general program aims to assist all cities, towns and communities in Stonewall, Haskell, Young, Throckmorton, Jack, Fisher, Jones, Shackelford, Stephens, Palo Pinto, Nolan, Taylor, Callahan, Eastland, Erath, Runnels, Coleman, Brown and Comanche counties in forming local safety units to be affiliations of all local safety activities.

Meeting of the Mid-Continent Petroleum Safety Council

The Mid-Continent Petroleum Safety Council, composed of the safety directors and supervisors of the oil companies in the Mid-Continent, held their May meeting in Bartlesville, Okla., May 22, at the invitation of Harry T. Markee, safety director, Phillips Petroleum Co., chairman of the council.

Among the visitors introduced were G. M. Kintz, U. S. Bureau of Mines, Dallas, Tex.; Don Connelly, Cabot Carbon Co., Pampa, Tex.; Steve Redfern, Globe Refining Co., Wichita, Kans.; Mr. Sutton, Ohio Oil Co., Findlay, Ohio, formerly of Tulsa; Walter Engle, American Optical Co., Kansas City, Mo.; H. N. Blakeslee, director of accident prevention, American Petroleum Institute, and A. W. Breeland, chairman of the Accident Prevention Committee, American Gas Association, Dallas, Tex.

The climax was the presentation of National Safety Council President's Award, made by C. R. Musgrave, vice president in charge of traffic, Phillips Petroleum Co., to Fred Claiborne, of the safety department, Stanolind Oil & Gas Co., Tulsa. Because of illness in his family, Mr. Claiborne could not be present. This award is given for saving of a life by artificial respiration.

After luncheon, the 70 men in attendance were guests of Frank Phillips at Woolaroc ranch.

Oil Speakers at National Meeting of Sales Managers

Frank W. Lovejoy, sales manager of Socony-Vacuum Oil Corp., New York, will speak before the National Federation of Sales Executives in Philadelphia on Monday morning, June 5.

"Sales Management Accepts the Challenge," is the title of a talk by H. W. Dodge, vice president and general sales manager of Texas Corp., New York, at the afternoon session on June 5. Later, Carl Wollner, president of Panther Oil & Grease Co., Fort Worth, Tex., will speak on "The Sales Manager's Future."

W.P.R.A. Considers Specifications Law

The specifications committee of the Western Petroleum Refiners Association has held a session in Tulsa, pondering over the new state specification law, H. B. 437, which effective July 1, calls for establishment of definite specifications of gasolines and burning oils, with an inspection clause. The inspection is to be done by the Corporation Commission.

A public hearing is due to be held by the commission the week of July 12, at which the commission will receive recommendations from refiners and others and outline how it will proceed to enforce the new law.

Panhandle Geological Group To Make New Mexico Trip

AMARILLO, Tex.—The Panhandle Geological Society has planned a field trip for June 10 and 11 in the area near Roswell, N. M. The party will meet at the Nickson Hotel in Roswell on Friday night, June 9, and on the first day will cross the north end of the Sacramento Mountains by way of Cloudcroft and through the La Luz Canyon into the Tularosa basin and will end at Alamogordo. This part of the trip will be a study of the Paleozoic rocks and a visit to the White Sands Monument.

The second day's trip will go from Alamogordo to Carrizozo and on through the Lake Nogal and Capitan areas and back to Roswell through the Hondo Valley. The first part of the trip will be conducted by Dr. H. G. Walter, district geologist for Texas Co., of Amarillo; the second part by Dr. C. G. Patton of Texas Technological College, Lubbock, and will be a study of the Cretaceous rocks.

National Motor Truck Show During A.P.I. Meeting

The sixth annual National Motor Truck Show will be held on Navy Pier, Chicago, at the same time as the American Petroleum Institute meeting, November 13, Col. J. F. Winchester, president of National Motor Truck Show, Inc., announces.

Colonel Winchester delivered a paper before the Transportation Section of the Oil-World Exposition at Houston, Tex., and had opportunity of interviewing many prospective exhibitors for the truck show.

MAGNETIC STORM

TUCSON, Ariz., May 28.—A moderate storm began May 21 at 8 a.m. and ended May 26 at 5 a.m. central standard time.

A moderate storm began May 27 at 3 p.m. and ended May 28 at 7 a.m. central standard time.

CALENDAR

June

INTERSTATE COMPACT COMMISSION, Santa Fe, N. M.

ILLINOIS-INDIANA PETROLEUM ASSOCIATION, seventh annual conference, Robinson, Ill., June 3.

PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION, Pittsburgh, Pa. June 15-16.

AMERICAN SOCIETY FOR TESTING MATERIALS, forty-second annual meeting, Chalfonte Haddon Hall, Atlantic City, N. J., June 26-30.

THIRTEENTH INTERNATIONAL CONGRESS OF CARBIDE, ACETYLENE, OXYACETYLENE WELDING AND ALLIED INDUSTRIES, Munich, Germany, June 25-July 1.

July

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, regional meeting, San Francisco, Calif., July 10-17.

August

MICHIGAN OIL AND GAS EXPOSITION, Mount Pleasant, Mich., August 1-6.

September

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, September 4-8.

OIL WORKERS INTERNATIONAL UNION, Hammond, Ind., September 5.

AMERICAN CHEMICAL SOCIETY, Boston, Mass., September 11-15.

MONTANA NATIONAL BITUMINOUS CONFERENCE, Sun Valley, Idaho. Sept. 11-14.

NATIONAL PETROLEUM ASSOCIATION, 37th annual meeting, Hotel Traymore, Atlantic City, N. J., September 13-15.

October

AMERICAN GAS ASSOCIATION, annual convention, New York, October 9-10.

FORTIETH ANNUAL NATIONAL AUTOMOBILE SHOW, Grand Central Palace, New York. Oct. 16.

NATIONAL TAX CONFERENCE, Palace Hotel, San Francisco, Calif. Oct. 16.

NATIONAL SAFETY CONGRESS AND EXPOSITION, Chalfonte Haddon Hall, Atlantic City, N. J., October 16-20.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, tenth annual meeting, Fort Worth, Tex., October 18-20.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Los Angeles, Calif., October 19-20.

November

NATIONAL MOTOR TRUCK SHOW, Navy Pier, Chicago. Nov. 8-16.

AMERICAN PETROLEUM INSTITUTE, twentieth annual meeting, Stevens Hotel, Chicago, November 13-17.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, Providence, R. I., November 15-17.

December

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Philadelphia, Pa. Dec. 4-7.

May 1940

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, Okla., May 18-25.

June

THIRD WORLD PETROLEUM CONGRESS, Berlin, Germany. June 9-15.

ENGINEERING and OPERATING

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In a field now being developed a number of problems have arisen in connection with carrying on production operations at properties which are inundated during flood periods. Measures taken for dealing with these as well as other difficulties are discussed.

DATA FOR DETERMINING THE COST OF PIPE STILLS
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This is the second part of a treatise on the subject of pipe still data. The equations derived in the previous article are applied to actual pipe still designs in this article.

SAFETY—FOURBLE BOARD MADE FROM OLD DRILL PIPE ..... *Page 36*

The advantages to be obtained by using old drill pipe in the construction of a fourble board are explained together with a description of the type of construction adopted by one contractor.

SOCIETY OF AUTOMOTIVE ENGINEERS—Abstracts of Papers ..... *Page 43*

Summaries of several papers presented before the recent New York meeting of S.A.E. review subjects of interest to the oil industry; among these are a new laboratory method proposed for rating aviation fuel octane value and laboratory tests for lubricants.

CONTROL PROBLEMS ARE AFFECTED BY REGULATOR DESIGN
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The author covers a number of phases of meter operations with the object of pointing out improvements which have been found to be practical where they have been used recently.

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Producing Problems Contended With at Sac and Fox Pool

By PAUL REED

One of the most active areas in Oklahoma is the Sac and Fox pool in Lincoln County, 4 miles south of Stroud, where production comes from Prue sand, varying in thickness from 60 to 100 ft., found at a depth of about 3,000 ft. Geologically the pool is on a terrace; no water is produced with oil in the main body of the pool; oil is 46° A.P.I. gravity. Producing problems, therefore, do not include those connected with the production and disposal of brines from underground formations except in the case of a few edge wells. However, operators are confronted with the necessity of dealing with a water problem on the surface which is serious when floods inundate the low ground, where a large part of the operations in this pool are carried on. Before discussing the means employed for combating high-water conditions and before describing what is done to handle the acute paraffin trouble, which is more serious than it is in any pool in that area of Oklahoma, a brief review of the pool will be given.

The Sac and Fox pool is another case of important development following several years after original discovery and drilling of a few wells appeared to have defined a pool of small extent which could profitably be exploited. In 1924 H. F. Wilcox Oil & Gas Co. procured a lease of 720 acres from the Sac and Fox tribe which ran for 10 years. In 1934, according to the terms of the contract, it became necessary to turn back the lease to the Indians with the casing in three wells which had been drilled in the years from 1924 to 1926. These three wells together were making 70 bbl. when the lease terminated. The company bought the property back at a public sale for $20,500 with a lease without a time limit; this provides for continuing future operation according to the terms which are customary in oil and gas leasing.

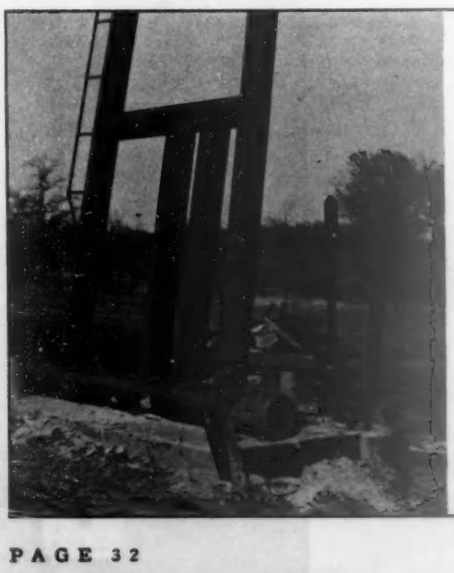
Following the repossession of the lease, two more wells were drilled; the first one made 25 bbl.; the second one made 274 bbl. More acreage was acquired and, since then, development of the properties has gone steadily forward. During this campaign four dry holes have been drilled by the company; only two of these are on leases in active areas of the pool. Altogether, the company has 4,200 acres in the pool and the immediate vicinity. Other operations in the pool belong to Coralena Oil Co., Helmerich & Payne, Inc., Jones and associates, Mudge Oil Co., Sinclair Prairie Oil Co., and Cooper Drilling Co.

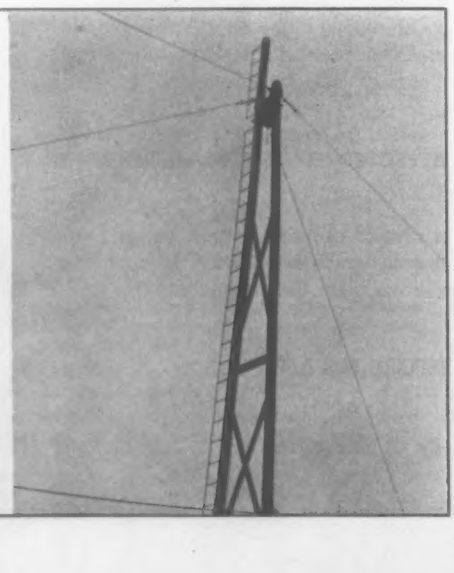
Wells Drilled in 14 Days

Under present conditions the 3,000-ft. wells in the pool are usually drilled in about 14 days. This is in contrast to the 8 and 9-month periods taken to drill the first two wells in 1924 and 1925, one of which was drilled with cable tools and the other with rotary. In the fall of 1937 the well that started the revived activity was completed in 29 days. Records of the original cable-tool well drilled in 1924 show that pipe was set to shut off water at depths of 400, 860, and 1,400 ft. Present practice is to set 200 ft. of 10-in. surface pipe and 3,000 ft. of 7-in. It is customary to drill in with cable tools after wells have been drilled to the formation with rotaries. All wells are drilled by rotary rigs which are operated by the company. The Wilcox company shoots wells with 200 qt.; some of the other operators in the pool use shots two and two and a half times as large. In completing a well, 2-in. tubing is set in a gas-anchor packer. However, the practice of using shots of the same size as those used by Wilcox is favored by a number of operators in the pool who have experimented with the larger shots.

When a well is completed which is located on low ground, subject to inundation during flood periods, provision is made for foundations suitable for elevating pumping equipment above the water. Levels are run by a surveyor, and after the height required for the foundation has been determined, 6-in. pipe used for piling is driven into the ground; later, when it becomes necessary to pump the wells, a platform for pumping equipment is placed on top of the piling. Because of the light nature of the high foundations, plans have been made to use electric power for pumping wells in the flooded areas. It is expected that wells on high ground will be equipped with gas-engine powers. At the present stage of development most of the production is in the low ground. Because of this, operators have had to provide corduroy and rock-ballasted roads appropriate for the swampy conditions which occur periodically. A number of

Right: Electric pumping unit mounted on piles set in concrete. Lower left: Bottom of mast erected on foundation. Lower right: Top of improved type of mast with ladder extending above the sheaves





Tank battery on levee raised above high-water level. Pump on platform at right delivers oil to pipe-line relay station

Elevated engine-driven pumping unit operating a rod line by chain-driven back-crank equipment

tank batteries are placed on dikes of the drainage canal which crosses the pool; this makes it possible to raise them above the flood-water level. In operating properties under such conditions a boat must be kept on hand by the company as emergency equipment. During one flood period the shooter and his equipment were transported by boat to a well which was to be shot.

A feature of operations in the pool is the type of mast made of welded pipe which is widely used. The original three wells happened to be drilled on high ground, where they were equipped with standard derricks and pumping engines. In addition to the advantages of low cost and quick installation, the masts have a further advantage on flooded ground since they do not catch floating debris. Masts used on the Wilcox properties have been designed by the construction department. They are fabricated at the company's warehouse; frames are made of 7-in. casing; 3-in. pipe is used for the braces; the ladder is made of sucker rods. Including layout work, it takes 30 to 35 hours of a welder's time to make a mast. The company has found that three masts can be raised and guyed by a crew in a day. The latest type of mast is made with the ladder extending 6 ft. above the sheaves, which makes it easier to work on top of the mast; the man can reach down instead of being in a position where he must get the job done entirely by reaching up.

Out of the 65 wells now producing on the Wilcox properties, only eight have been equipped with pumping equipment, including the three wells drilled more than 10 years ago. It is planned that bottom-hole chokes will soon be tried out on some of the Wilcox wells. As pumping equipment is installed it is expected that 7½-hp. electric units will be used for wells in the low ground.

Paraffin trouble in the Sac and Fox pool is regarded as worse than it has been found to be in other areas in the state; in fact, it is said to be almost as bad as paraffin trouble in the Texas Panhandle. Scrapers are run through the tubing. Except in hot weather, lead lines are taken up every 90 days and brought to a boiler where they are steamed out.

Oil from the Wilcox properties is pumped through 3-in. and 4-in. lines to the company's refinery at Bristow, which is 20 miles away. About 5,000,000 cu. ft. of gas per day is taken by the Texas Co. at its Davenport plant.

Consideration is being given to plans for a pressure maintenance program to be carried on through cooperative arrangements made by the various operators having properties in the pool. The Wilcox company has equipment at gasoline plants, which are not now being operated, that would be available for a plant to be built in connection with a pressure-maintenance project. Gasoline recovered from gas would be mixed with crude oil pumped to the refinery at Bristow.

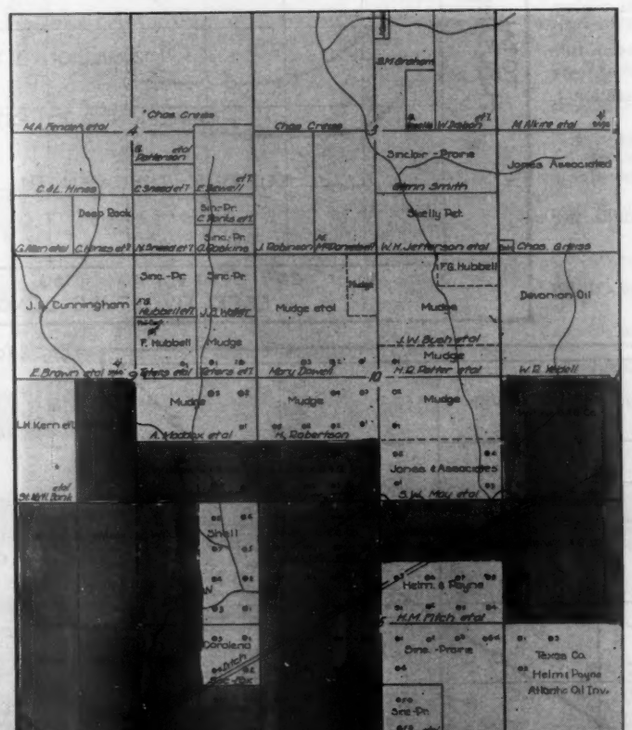
Significance of the Development

The development of the Sac and Fox pool calls attention to the possibilities which frequently exist where a few wells produce for a number of years before it is discovered that they adjoin a producing area of considerable extent. Another example of this kind of a situation is to be found in the experience of the Wilcox company with the Poor Farm pool, west of Bristow, where prolific production was opened up in the vicinity of wells which had passed out of the flush-production class quite a while before.

The development of the Sac and Fox pool has led to considerable drilling activity in the surrounding area in a search for other Prue sand pools. In the Davenport pool, 4 miles northwest, there has been some production from the Layton sand as well as from the Prue; however, the production as a whole has been predominantly Prue. Together, the Davenport and the Sac and Fox pools, which were both discovered in 1924, may be regarded as the outstanding individual Prue sand pools. Other important Prue production has been developed at pools with other producing horizons. In both the Davenport and Sac and Fox pools, similar conditions are to be observed in reservoir conditions. In each case there is a large lenticular body of sand which pinches out; water intrusion is from the west. Thinning of the sand prevented the migration of oil further to the east; oil has been retained in the thick body of sand in the center of the pool. The best wells are found where sand is the thickest; therefore, a study of sand thickness is of more importance in planning development than structure. The sand is fine grained and angular. In a summary of core analysis work done for wells near the center of the Sac and Fox pool, permeabilities differ widely from location to location. The sand of several wells has permeabilities ranging between 26 and 29.6 millidarcys; permeabilities of other wells are reported as between 3.6 and 10.7. Per cent of effective porosity is reported as between 10.4 and 22.9; per cent oil saturation 43.8 to 58.5. Recoveries have been estimated from 6,000 to 8,000 bbl. in the Davenport pool; because of the greater thickness of sand in the Sac and Fox pool considerably larger recoveries are anticipated there.

In reviewing results obtained in the examination of a core from a well near the center of the pool, conditions existing in the sand at that part of the producing area, are indicated in a statement which shows that oil content was found to be 880 bbl. per acre foot; effective porosity 22.9 per cent; oil saturation 49.8 per cent; permeability 26.8 millidarcys. Sand at this well has a storage capacity of 1,780 bbl. per acre foot. Resistance to fluid passage is not excessive.

Map of Sac and Fox pool. Location of low areas is indicated by streams and drainage ditch



Data for Determining Cost of Pipestills

By W. L. NELSON

The equations derived in a previous article[1] are here applied to actual pipestill designs. The cost equations are based on an overhead convection[1,2] type of still and hence cannot be applied directly to other types of stills. However, similar equations can be derived for almost any of the common types of pipestill construction. The final equations of total cost and economical tube length are repeated here.

Cost of pipestill:

$$C = E + \frac{B}{l} + \frac{D}{l^2} + Al \qquad (17)$$

Economical tube length:

$$Al^2 - Bl - 2D = 0 \qquad (20)$$

In these equations the symbol l refers to effective (or inside) tube length and the complicated constants, A, B, D, and E are composed of various cost items as follows:

$$A = 5C_{RF} + 12C_W + T_p'C_W \qquad (13)$$

$$B = 1.5C_t(LW+L'W') + LC_B + L'C_B' + .469LT_pC_W + .0277LT_pT_p'C_W - LC_S - L'C_S' \qquad (14)$$

$$D = .00078L^2T_p^2C_W \qquad (15)$$

$$E = (LW+L'W')C_t + .0277LT_p(C_{RF}+C_W) + (5T_p'+60)C_W + .125(LC_S+L'C_S') + (L+L')C_M + C_F \qquad (16)$$

In which

L = total effective length of all radiant tubing, feet
L' = total effective length of all convection tubing, feet
l = effective length of tubes (both sections), feet
T_p = tube pitch in radiant section, inches
T_p' = tube pitch in convection section, inches
W = weight of tubes, radiant, pounds per linear foot
W' = weight of tubes, convection, pounds per linear foot

This article is essentially a second part of the article entitled "Dimensions of Pipestills" which was published in The Oil and Gas Journal of May 11, 1939, page 63. The mathematical derivations given in the above article were so long they could not be presented as a part of this article.

C = total cost of still, dollars
C_t = cost of tubes, dollars per pound
C_B = cost of bends, radiant, dollars each
C_B' = cost of bends, convection, dollars each
C_S = cost of radiant tube supports, dollars per tube per support
C_S' = cost of convection tube supports, dollars per tube per support
C_{RF} = cost of roof, convection partition, and floor (complete), dollars per square foot
C_W = cost of walls (complete), dollars per square foot
C_M = cost of miscellaneous parts that are dependent on capacity, such as burners, openings, part of pipings, etc., dollars per foot of tubing
C_F = Cost of fixed supervision, engineering, overhead, etc., which is mainly independent of size.

Unit Costs

Many of the cost items listed above can be obtained by quotation from manufacturers or can be determined directly, and hence they require no attention in this article. Among such items are C_t, C_B, C_B', and C_F—or cost of tube steel, bends, and fixed costs. Other items such as C_S, C_S', and C_M—or cost of tube supports and miscellaneous items can be estimated fairly accurately from quotations, but the cost of walls (C_W), and floor and roof (C_{RF}) are such that they must be determined by analyzing the cost of an actual installation. As an indication of the values of these costs, approximate values are tabulated below:

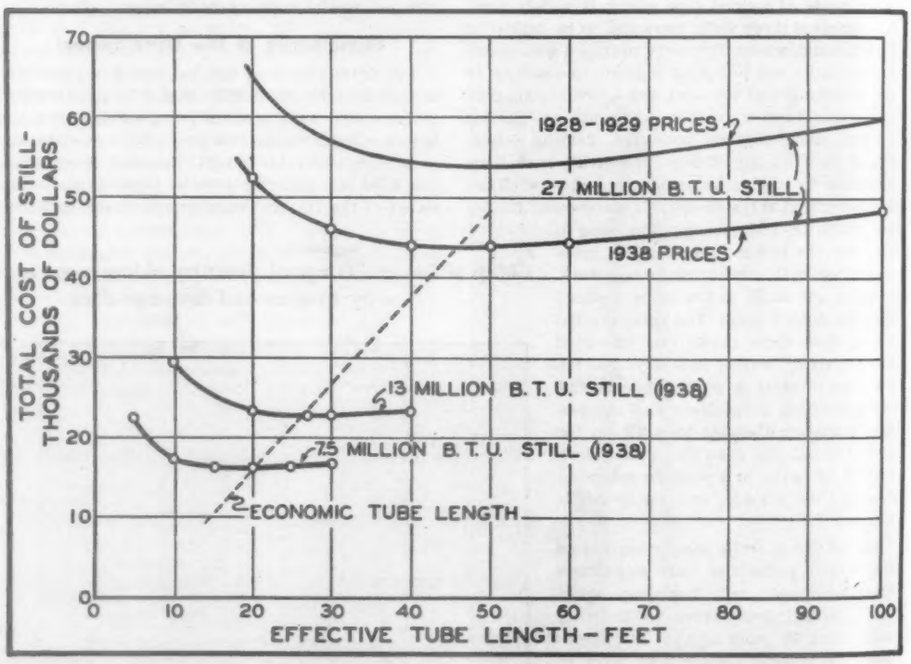


Fig. 1 (below)—Most economical tube length as a function of capacity

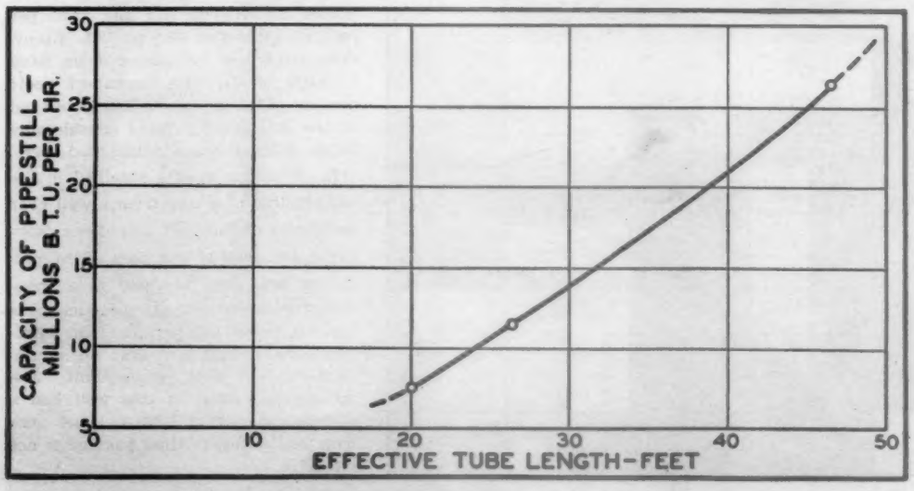


Fig. 2 (above)—Most economical tube length as a function of cost

C_t = cost of tube steels[3] = 5 to 9 cents for carbon steels; = 9 to 50 cents for alloy steels

C_B and C_B' = cost of bends = $15 to $60, depending on size and type (carbon steel)

C_S = cost of radiant section tube supports = $3 to $8, depending on type and kind of alloy

C_S' = cost of convection section tube supports = 6 cents to $1.25, depending on type and kind of alloy

C_F = fixed supervision, overhead, etc. = $4,000 to $10,000

C_M = miscellaneous costs dependent on size = 14 to 25 cents

C_W = cost of walls (complete) = $5 to $9,

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● "It is the most simple gage to service that I have ever seen." This statement is typical of the remarks made throughout the oil fields since the Penberthy Reflex Gage was introduced.

Note particularly the U-Bolt type of construction that is the strongest and the simplest to service. To replace a glass, simply remove the nuts on the face of the gage . . . it is unnecessary to work between the gage and the boiler.

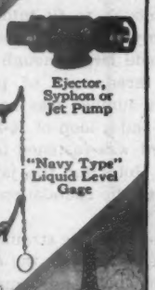
The Penberthy Reflex Gage shown here is available in both Navy Bronze and Malleable Iron; it is recommended for working pressures to 350 lbs. at 450° F. Gage is furnished complete with Penberthy "Dripless" Drain Cock shown.

Other Penberthy Reflex Gages are made in any length desired for higher pressures and for various kinds of liquids. Any leading oil well supply distributor will be pleased to quote upon your particular requirements.

PENBERTHY PRODUCTS

PENBERTHY INJECTOR COMPANY MANUFACTURERS OF QUALITY PRODUCTS SINCE 1888 DETROIT, MICH. Canadian Plant, Windsor, Ont.

Automatic Injector


Ejector, Syphon or Jet Pump

"Navy Type" Liquid Level Gage

"Safeguard" Automatic Liquid Level Gage

"All-Iron" Automatic Liquid Level Gage

Gas Engine Lubricator

Snap Lever Oiler

Plain Brass Oil Cup

Plain Compression Grease Cup

Screw Plunger Grease Cup

Spring Compression Grease Cup

Automatic Electric Sump Pump

Automatic Cellar Drainer (Water or Steam Operated)

Dipless Air Cock

depending on thoroughness of construction

C_{RF} = cost of roof, floor and convection partition = $8 to $12, depending on thoroughness of construction

In determining the cost of walls, roofs, etc., the other items such as tubes, bends, supports, fixed charges, and miscellaneous can be determined directly from quotations etc. on a known installation. Likewise, the roof and floor costs (C_{RF}) can be estimated fairly accurately by allocating a part of the total structural steel (say 50 per cent) to the roof, obtaining quotations from arch companies for the tile roof, and computing the cost of concrete foundations. The sum of all of these costs is then substracted from the total cost of the known installation and the remaining cost is allocated to the four walls. Such cost analyses were used in computing the costs listed above.

One important item was neglected in the equations but it can be easily corrected at this point. The cost of pipestill tubing increases with extreme length. One manufacturer charges 2.5 per cent more for 2 ft. of length exceeding 24 ft. Accordingly—

$$\text{Cost of tube steel} = C_t + 0.25\,\frac{l-24}{2}\,C_t$$
$$= 0.7\,C_t + 0.125\,C_t l \qquad (21)$$

Thus, Equation 21 can be used in place of C_t in all of the formulations given heretofore, if great accuracy is desired.

The general effect of tube length on cost is indicated in Figs. 1 and 2. In general, it seems that longer tubes than those usually employed in the past would be more economical. In the smaller stills (refer to Fig. 2), the use of longer tubes is of little significance because the tube lengths now used are sufficiently long to make little difference in the total cost—but in the larger stills, the use of longer tubes would result in a saving of several thousand dollars compared with the stills now constructed. However, an increasing number of long-tube stills are being built each year.

The effect of different price structures during nominal deflation and inflation conditions does not have a great effect on the economic tube-length because the relative prices of items remains much the same. This is indicated in Fig. 2 for the 27 million B.t.u. still. Note that the lowest cost occurs at 45 to 50 ft. with either 1929 or 1938 costs. Although only a single type of still construction and single still service was studied in Fig. 1, it appears that the relation shown in Fig. 1 should apply fairly well to all stills.

References

1. Nelson—"Dimensions of Pipestills," The Oil and Gas Journal, p. 63, May 11, 1939.
2. Nelson—"Petroleum Refinery Engineering," pp. 409-10, McGraw-Hill Book Co., New York, 1936.
3. Nelson—"Evaluating Alloy Steel Tubes for Cracking Still Service," The Oil and Gas Journal, p. 79, June 24, 1937.

SAFETY — Fourble Board Made From Old Drill Pipe

A derrick-man who later was promoted to driller and from there to tool-pusher thought up this idea and explained it to the drilling contractor.

The 6-in. by 16-in. oak timbers commonly used for fourble boards on drilling rigs would frequently bend the derrick girts by their weight. Dry-rot in the boards was a hazard in view of the extra heavy traveling block used which occasionally hit the board. The oak timbers frequently projected beyond the derrick legs and were an obstruction when it came time to box in the board during winter weather. The customary length of the timbers was 16 ft. and they were often hard to put in place, particularly after the blocks were strung. There was also the difficult problem of notching the wooden board so the derrick would accomodate 15 stands of drill pipe in each row.

This derrick-man reasoned that his design for a fourble board would not only be safer, but would be more permanent, have greater pipe capacity and be easier to work on. It would also be easier to install. The contractor agreed with him so they hired a welder and went to work.

Two pieces of discarded 6⅝-in. drill pipe were used for a foundation. These were cut down to about 14 ft. in length and a half section 16 in. long cut from each end so the pipe would lay flat on the girt. Slots were made for jay-bolts with which to fasten the foundation pipe to the derrick.

The fourble board frame was made from old 4½-in. drill pipe braced with 4-in. channel irons. It was made long enough to fit into the derrick at the point commonly used. The inset, or notch, in the board was made large enough to add two stands to each of three rows of pipe racked. Rough 3-in. by 12-in. lumber was used to cover the drill pipe frame and a loop of ⅝-in. wire line for landing the board was fastened to the center channel iron brace. Holes for the jay-bolts used to clamp the board to the foundation pipes were burned through the frame.

The foundation pipes put the strain on the girts at a distance of about 6 in. from the derrick legs. In case the traveling block lands squarely on the board, a remote possibility, all of the weight will be transferred near enough to the derrick legs to prevent bending the girt and subsequent weakening of the structure. The notch in the board allows six stands of drill pipe to be handled which otherwise would have to be placed nearer the center of the derrick and add to the crowding of the traveling blocks.

The steel frame makes an excellent surface over which to slide the pipe, particularly after it gets a little damp from the moisture on the drill stem. Complete bolting throughout makes the board an almost intergral part on the derrick and is much safer than the ordinary wooden board. To be consistent, the contractor purchased ⅝-in. wire line with which to tie all of the hand equipment used by the derrick-man and also built a tong board from 6⅝-in. drill pipe which was bolted to the derrick in the same manner as the foundation pipes for the fourble board.

The arrangement is very flexible and in case it is necessary to locate the fourble board between girts to accomodate drill pipe lengths, the foundation pipes can be turned 90° and bolted to the derrick legs. The board can be located as near the line of travel of the blocks as the derrick-man desires. Space between the board and derrick legs is filled with 6- by 8-in. timbers.

Derrick manufacturers have since cured part of original reason for the designing of this board by strengthening the girts on which the board ordinarily rests but because of its many features, the contractor had boards built for each of his five drilling rigs.

Physical Constants of the Principal Hydrocarbons

The recent issue of "Physical Constants of the Principal Hydrocarbons," by M. P. Ross, of the technical and research division of the Texas Co., is a book which will prove of much help to all investigators of petroleum compounds. It contains data that are frequently difficult to find in the literature.

The formulas and constants given are those for the numerous aliphatic, naphthenic, aromatic and certain unsaturated hydrocarbons that have been separated from, or associated with, petroleum. The compounds are described in detail and an example is given of the oil from which each compound has been obtained, together with reference to the authorities. This material is a valuable contribution to the petroleum industry.

Purchase Price of rope doesn't fool me. Don't let it fool you. Purchase Price means little to ultimate rope costs. It is the rope cost per-mile-car-travel . . . per-M-feet-of-lumber . . . per-foot-hole-drilled that tell you the real story of quality. Wickwire Ropes cost no more to buy than other recognized brands . . . but they are fabricated with a knowledge and care beyond accepted requirements. Greater flexibility, greater toughness . . . long life results. Use a Wickwire Regular Lay or a Wisscolay Preformed Rope and measure the service it gives you by your unit of use. Then you'll know you are using the finest rope.

WICKWIRE SPENCER STEEL COMPANY

General Offices: 500 Fifth Avenue, New York City; Sales Offices and Warehouses: Worcester, New York, Chicago, Buffalo, San Francisco, Los Angeles, Tulsa, Chattanooga, Houston, Abilene, Texas, Seattle. Export Sales Department: New York City.

Operating Kinks Winning Prizes, N. G. A. A. Meeting

[Other Prize Winning Kinks Have Appeared in Previous Issues and More Will Be Published in Succeeding Issues]

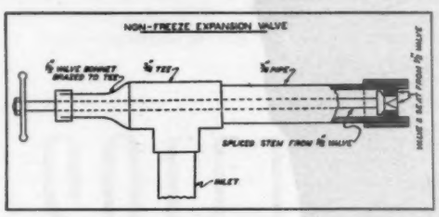
Freeze-Proof Expander for Wet Propane-Butane Mixture

FIRST PRIZE, CLASS B

D. A. JOHNSON, repairman

Cities Service Oil Co., Wichita, Kans.

This device eliminates the installation of a heater on the line and makes use of available heat instead of wasting it. We were expanding wet propane-butane mixture into raw casinghead gasoline through a throttle valve. Considerable trouble with freezing



in the valve was encountered, and instead of putting a heater on the line we built a valve, as shown in accompanying sketch, to cause the expansion to take place inside the gasoline tank, thus using some of the heat in the gasoline to take care of the expansion. A throttle valve with the body cut out was used in the construction of the expansion valve. Pressure drop through the valve was around 225 pounds.

This is an adaptation of the freeze-proof drain valve idea which is often used in draining water from storage tanks.

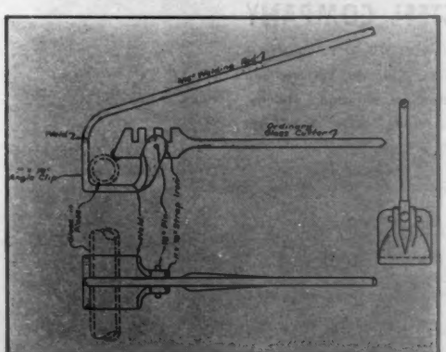
Gage Glass Cutter

FIFTH PRIZE, CLASS D

J. PAUL MYRACLE

Lone Star Gas Co., Trinidad, Tex.

With the conventional Chesterton gage glass cutter one may laboriously cut off a gage glass in short pieces not longer than 8 in. at a time until one has cut a long piece down to the size wanted. With this application of the ordinary Red Devil glass cutter the cut may easily be made at any point along the gage glass desired, saving much glass and work.



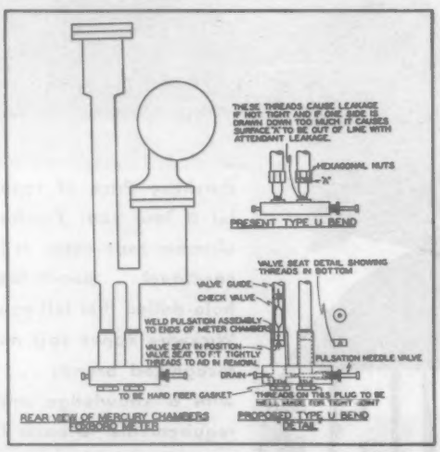
New Style of Meter Connection

THIRD PRIZE, CLASS B

J. M. RIBBLE, meterman

Phillips Petroleum Co., Phillips, Tex.

In the repairing and maintenance of a Foxboro meter one of the sources of considerable trouble is the means used to fasten the U-bend to the high- and low-pressure


THESE THREADS CAUSE LEAKAGE IF NOT TIGHT AND IF ONE SIDE IS DRAWN DOWN TOO MUCH IT CAUSES SURFACE "A" TO BE OUT OF LINE WITH ATTENDANT LEAKAGE.
HEXAGONAL NUTS
PRESENT TYPE U BEND
VALVE SEAT DETAIL SHOWING THREADS IN BOTTOM
VALVE GUIDE
CHECK VALVE
WELD PULSATION ASSEMBLY TO ENDS OF METER CHAMBERS
VALVE SEAT IN POSITION—VALVE SEAT TO FIT TIGHTLY THREADS TO AID IN REMOVAL
PULSATION NEEDLE VALVE
DRAIN
THREADS ON THIS PLUG TO BE SHELL MADE FOR TIGHT JOINT
TO BE HARD FIBER GASKET
REAR VIEW OF MERCURY CHAMBERS FOXBORO METER
PROPOSED TYPE U BEND DETAIL

chambers of the meter. On the present U-bend two hexagonal nuts are used to fasten the U-bend to the meter body. The threads on these nuts and on the meter chambers are very fine and often strip after moderate use. Also the parts of the meter to which the hexagonal nuts fasten and the hexagonal nuts, too, are very thin walled which allow the tube to become egg-shaped when any considerable force is applied in making up the joint.

Another trouble factor is the thread joint on the riser, where the riser screws into the U-bend block. These joints often leak and, in making them tight, it is hard to keep from having the flat surface "A" (see drawing) uneven. Should these joints be uneven the gaskets will not fit evenly and the hexagonal joint will leak. In order to overcome the above trouble points the accompanying drawing is offered as one means of providing a design having all the advantages obtainable with the present hexagonal nut construction, and possessing advantages of its own which merit its use. On the drawing the proposed type U-bend shows a welded joint which replaces the hexagonal nut joint and a welded joint to replace the threads where the riser joins the U-bend block. Two steel plugs are shown in the bottom of the new block (which is seven-eighths inch square instead of five-eighths inch square) providing an opening for installing and removing valve guides, valves and valve seats from below. These plugs are to have well-made threads and will use hard fiber gaskets to assure a leak-proof joint. Drain screw, pulsation needle valve and gland assembly is to be left as used in the present type.

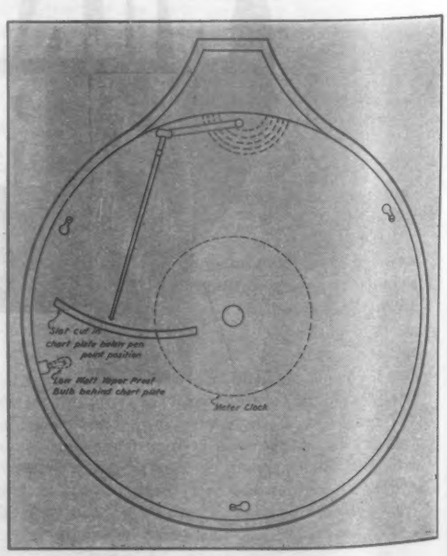
Recorder Chart Illuminator

SECOND PRIZE, CLASS B

E. D. EGLESTON, chief engineer

J. E. Crosbie, Inc., Fittstown, Okla.

The recorder chart illuminator can be made in a short time with very little expense. A candelabrum socket is mounted on side of the recorder under the chart plate, and just below the pen arm arc. A slot one-half inch wide is cut in chart plate just below where the pen point writes. A low-watt bulb is used. The interior of the recorder is



Collective Dubbscracking

Four Pennsylvania refiners made history in 1931 when they built the world's first cooperative Dubbscracking unit at Oil City—Pennzoil Company, James B Berry's Sons Co, Inc, Wolverine-Empire Refining Company and Continental Refining Company

Says J P O'Donnell in *Oil and Gas Journal:*

> **The plant has operated to the complete satisfaction of the four participating companies**
>
> **On account of its size the cooperative plant naturally has a lower cost per barrel than any of the companies could have attained individually**

Now that size has been increased by 2000 barrels a day to make more Dubbscracked gasoline and cut costs still further They have put in a U O P poly plant, too

Dubbscracking is the way to make gasoline—individually or collectively

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

painted white so as to reflect the light over the entire chart, and the slot in the plate reflects a bright light just below the pen arm, which makes the chart easy to read.

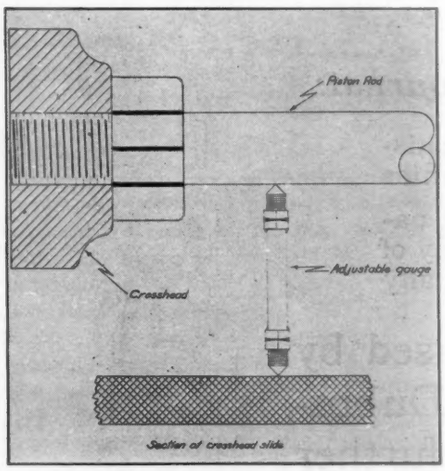
With the ordinary light hanging above the instrument board the operator's shadow is usually on the chart, making it much harder to get an accurate reading, without a flashlight. The light inside the recorder gives the same effect as the light on the instrument panel of an automobile. The heat from the bulb will keep the small tubes in a recorder controller from freezing in cold weather should a drop of water be brought in with the air supply.

Piston Aligner

FIFTH PRIZE, CLASS A

GRAYDON GOWER, chief engineer
Phillips Petroleum Co., Oklahoma City, Okla.

The piston aligner has been in use quite some time and has been found very useful. Unless a piston is in perfect alignment excessive wear takes place on both the piston



and cylinder. This simple tool makes the desired alignment possible. It also eliminates the possibility of snapping a piston rod, wear on the cross head, and keeps the packing from becoming egg-shaped. It is simple in design, economical, time saving, easily adjusted and can be used in a small working space.

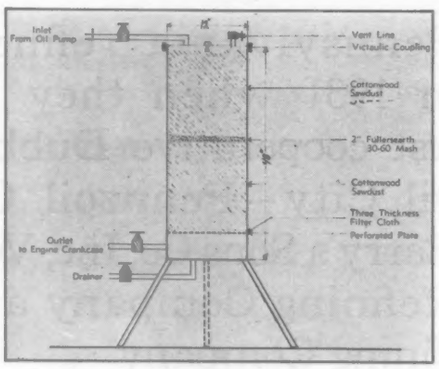
Cottonwood Sawdust Filter for Engine Oil

FIFTH PRIZE, CLASS A

E. W. BURT, superintendent
Aldon Gasoline Co., Haven, Kans.

The rings and the other working parts of our engines were clogged with sludge. The engine efficiency was decreased at least 25 per cent, and one or both engines would always die when the load came up enough to raise the compressor intake pressure above atmospheric pressure.

The cottonwood sawdust filter was used to eliminate this sludge after it had been loosened from the engine parts by means of an additive which put the sludge in suspension in the oil. The filter was installed on a 300-hp. gas engine compressor with a 75-gal. crankcase capacity. The additive was added at the rate of 2 per cent of the engine oil. After 16 hours of operation, the sludge had been removed from the engine parts and filtered out of the oil. This left the oil with a dark red color, and when a drop of the oil was placed on a filter paper, no specks of sludge or carbon could be observed. Previ-



ous to the cleaning, it appeared that half of the crankcase oil was sludge. After the use of the filter, no sludge adhered to the bottom of the crankcase. Before, fully half an inch of sludge had to be removed before the metal was uncovered.

The drawing will aid in the description of this filter. Briefly it is a cylinder 12 in. in diameter and 4 ft. high containing sawdust and fuller's earth. Oil enters at the top of the filter and returns to the crankcase from the bottom. The filter is connected in parallel with the oiling system of the engine, and the oil pump pressure forces the oil through the filter. The oil is taken from one end of the crankcase and returned to the opposite end. This prevents recycling of the newly filtered oil. A layer of rags at the bottom of the filter keeps the sawdust out of the engine. The fuller's earth is placed at the middle of the filter between two layers of sawdust. The only function of the fuller's earth is to remove any acid that might form in the oil. The sawdust alone is capable of filtering out the sludge.

The drawing shows the fittings needed in the construction of the filter. The cost is itemized below:

4 ft. of ⅛-in. by 12-in. pipe, at $1.25	$5.00
1—12-in. Victaulic pipe coupling	7.00
Fittings and pipe	5.00
Welding	7.50
¼ cu. ft. of 30-60 fuller's earth	0.50
Total	$25.00

In Kansas, the cottonwood sawdust can be had for going after it.

Now the engines can easily be overloaded 13 per cent of full load, where they previously would not handle rated capacity. Before using the filter, the load would kill an engine at atmospheric compressor intake pressure, but now the intake pressure can reach 9 lb. without killing an engine.

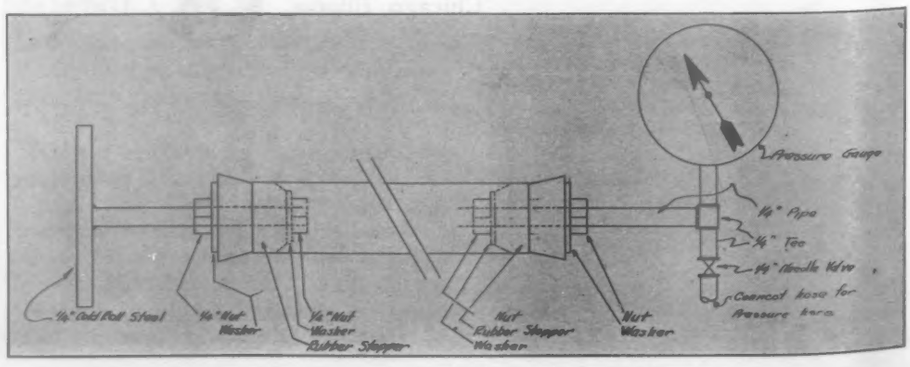
Without taking into account potential repair bills caused by dirty engine oil and also the cost of cleaning up the engines manually, we have saved at the rate of $1,190 per year by the use of this filter and additive. The rings are freed of sludge and consequently less oil is used. The oil does not have to be changed as frequently as before. Previously, an oil change was necessary after three months of operation. Now, two changes per year or less are sufficient. The saving in oil at 40 cents per gallon is $90 per year per 300-hp. engine. The additional gas that can be handled in a year's time and the elimination of gas waste due to the killing of an engine at full load will amount to a saving of $1,100 per year per 300-hp. engine.

Condenser Tube Tester

FOURTH PRIZE, CLASS D

ALFRED McMURRY, and W. H. STAUS, operators, Skelly Oil Co., Pampa, Tex.

By using the connections shown in the drawing, a tube tester has been made for testing individual tubes in several different types of coolers and condensers. By testing each tube separately, all guesswork is eliminated and a considerable saving of time and labor is effected. At the plant where this has been used a bundle of 206 tubes in a heat exchanger has been tested in 20 minutes.



S. A. E. Abstracts

Papers presented before the New York meeting of the Society of Automotive Engineers, May 22 to 26.

Experiments With Doped Fuels for High-Speed Diesel Engines

By J. J. BROEZE and J. O. HINZE

"Delft" Laboratory, Royal Dutch-Shell

The use of dopes may be considered to be one of the most promising methods for improving the ignition quality of Diesel fuels, should such improvement appear to be necessary. In particular their use may make it possible to meet special requirements with respect to a high cetane number combined with a low cloud- and pour-point of the fuel. In order to fix the mind the authors point to such a combination as a minimum cetane number of 55-60 and a pour-point below —40° F. Such a combination is included in tentative and recommended specifications by the U. S. Navy and Army Air Corps, and a somewhat similar combination would be certainly required for many Diesel aero engines.

The effect of the dope, expressed in the decrease of the ignition delay, is greater in a low-cetane fuel than in a high-cetane fuel. However, due to the hyperbolic character of the curve of cetane number versus ignition delay, the effect of a dope when expressed in the increase in the cetane number is greater in a high-cetane fuel than in a low-cetane fuel. Comparing two fuels of equal cetane number, one undoped and the other with a dope, and further adding equal amounts of dopes to both fuels, then the effect of this dope addition is greater on the undoped than on the doped fuel.

Numerous experiments on wear and incrustation problems have so extended our knowledge on the subject as to allow the authors to predict what results will be obtained in this respect with a certain fuel.

The origin of incrustations may be sought in incomplete combustion, due to poor ignition quality, high residue content and/or high viscosity (poor atomization and poor evaporation) of the fuel.

Apart from the effect on the ignition quality, none of the other fuel properties will be unfavorably affected by a good ignition dope. Hence one can hardly expect any other effect of a dope on wear and incrustation that will be determined by the increase of the ignition quality.

A New Laboratory Method for Rating Aviation Fuels of High Octane Number

By R. STANSFIELD and H. B. TAYLOR

Laboratory ratings of aviation fuels are unsatisfactory with existing equipment and technique. First tentative standard method adopted for fuels to meet British Air Ministry specifications was the outcome of tests in single-cylinder aero-engine units, knock being determined under conditions of maximum economy and for fuels of lower octane number than now prevail. As the use of 87 and 100-octane-number fuels became more important it was found that an increase of mixture temperature to the motor-method value was desirable. Development work leading to the method to be suggested is based on two premises: first, that any fuel must exceed a definite minimum anti-knock value appropriate for its class when used under lean-mixture cruising conditions, and, secondly, that it must exceed a second minimum when used under rich conditions appropriate for takeoff. Only data from a full-scale British-designed aero-engine of large cylinder capacity has been considered. Development of the method started from two assumptions: that the motor method, a weak-mixture test, should be capable of alteration to suit rich-mixture conditions, and that instrumentation such as provided by the bouncing pin, the temperature plug or oscillograph-pressure diagrams was unsuitable.

Since absolute height of the detonation wave on the oscillogram can be affected by very small alterations to engine condition, even though compression ratio, mixture temperature, mixture strength and running speed be held constant, the usual method of comparison against secondary standard fuel blends has been adopted. For example, if a series of 87-octane-number fuels is being tested, each fuel is compared for peak height of detonation wave with the height given under identical running conditions by a blend of C and F secondary reference fuels, and the rating is first given as a knock ratio. Thus, if an 87-octane-number blend of C and F gives a height of 3 in. and a sample a height of 2 in., the sample is rated as having a knock ratio of 0.67. These ratios may be converted to equivalent octane numbers by testing a series of C and F blends which cover the required range.

Relation of Diesel Fuel Properties to Their Engine Performance

By W. S. MOUNT and G. A. HOPE

Socony-Vacuum Oil Co., Inc.

This paper represents a study of some of the fundamentals which might point to effective means for improving the performance of existing high-speed Diesel engines.

Only problems which lend themselves to ready solution in the laboratory were explored. Among these are the short time tests involving engine performance and more precise measurements of combustion phenomena.

Seven engines were used in the work and all of them were of the high-speed type in which the sizes ranged from 3 hp. to 75 hp. per cylinder.

The measurements fall into two classes; first, those involving the performance of the engine as evidenced by power, fuel consumption, exhaust smoke and, secondly, those having a direct bearing upon the combustion process.

The result of the tests led the investigators to several conclusions.

The importance of very high cetane number appears to have been overestimated.

The roughness of combustion as measured by knock intensity with the oscillograph is improved by use of fuels having a cetane number approximately 10 units higher than the minimum needed to prevent misfiring.

The combustion knock in a Diesel engine finds its origin with the lighter unsupported metal structures. The valve case cover plates, side cover plates and crankcase pan appears to be noisiest.

The combustion cycle in an engine built for variable speed ranges from partially controlled combustion at rated load to totally uncontrolled combustion under conditions approaching idling.

If the design of the Diesel engine is such that the combustion process is uncontrolled, no reasonable fuel improvement will produce smooth combustion.

It is possible to burn fuels ranging over wide limits in respect to amount of cracked and straightrun stocks, viscosity, volatility, gravity, and crude source, without deflecting the combustion curve from its normal path. Similar changes in fuel affect the maximum power and fuel consumption no more than 5 per cent, except in special cases.

Variations in the combustion process with normal changes in speed and load are many times greater than effects of fuel quality improvement.

Adjustment of injection advance as a means for correcting poor ignition quality is too dangerous an expedient for the engine operator to employ.

Underwood Oxidation Test and Its Correlation With Service

By H. C. MOUGEY

Research Laboratories Division, General Motors Corp.

In order to correlate any test with service it is necessary to determine just what the service records actually are. The men who have been interested in lubrication in both the oil and automotive industries have been working on this subject for many years.

It was soon learned that the performance of oils in engines, in regard to oxidation, depended to such a great extent upon the effects of catalysts and inhibitors that no real study of the problem could be made without taking these factors into account. The engines in which the oils are used are made of metals, and most metals, including iron and copper, are powerful oxidation catalysts. In refining oils there is a tendency to remove, more or less completely, the natural inhibitors that are present in varying amounts in all crude oils, and, consequently, with some oils refined by some methods, it is very desirable to add inhibitors to the refined oils to replace those removed in the refining process.

Since many of the oils that caused corrosion trouble rated very highly by the Indiana test and since the Indiana oxidation test is made "in glass flasks without metal present" to avoid the effect of catalysts, it appeared desirable in the work on corrosion to develop new tests in which the oil would be subjected to the action of air at elevated temperatures in the presence of metals and to study the effects of catalysts and of inhibitors on the oils under these conditions. One of these new tests was the Underwood test, developed by A. F. Underwood and described by him in a paper presented at the summer meeting of the S.A.E. in 1938.

By means of the Underwood test we can:

1. Test an oil to determine whether or not it will oxidize, and, if it does oxidize, what products, acid, sludge, etc., will be formed and in what amounts.

2. Determine the amount of inhibitor in an oil, by adding measured amounts of a catalyst, and find out how much catalyst is necessary to neutralize the inhibitor in the oil.

3. Determine the oxidation characteristics of the

oil without inhibitor, by adding enough catalyst to counteract the effect of the inhibitor in the oil and then oxidizing the oil. This test indicates the character and amount of oxidation products which may be expected when the oil is oxidized in the engine under conditions where the inhibitor is not effective, for example, on the cylinder walls or in the combustion chamber.

Engine Deposits, Field and Laboratory

By J. P. STEWART and B. W. STORY
Socony-Vacuum Oil Co., Inc.

The authors discuss deposits observed in the field rather than in the laboratory, using the latter only to clarify uncertainties of field observations. They confine themselves to those deposits which are most objectionable to the fleet operator, who must keep his fleet operating with the least lost vehicle time.

Engine deposits fall into four main categories: Those that endanger the engine through interference with oil distribution; those that cause a gradual lowering of the efficiency of the engine as an operating unit until an engine overhaul is required; those that interfere with the proper functioning of some engine part and result in interrupted service but which do not cause damage to engine parts; lastly, deposits which in themselves do not interfere with engine operation but which make the engine overhaul a more difficult and costly job.

Deposits in the four categories are: (1) Coffee grounds, lacquer and so-called sludges; (2) deposits which form on the piston and which by interference with ring action and in conjunction with worn piston rings produce abnormally high oil consumption, and blowby; (3) lacquers which form on various members of the valve mechanism and interfere with valve action; (4) sludge deposits in the timing gear chamber, dry adherent deposits on the crankshaft, deposits plastered on crankcase walls, cover plates, in valve chambers, etc.

Excepting those for which fuel may be directly responsible, the deposits are the result of oil decomposition. However, the transition of the oil from its original state to that at which it begins to lay down such deposits, is not a single stop but a long and involved chain of events; if the oil were removed from the engine before this final state was reached, the deposits would not have occurred.

An exception is the condition created by abnormally high piston temperatures where rapid oil decomposition occurs while the oil is passing slowly through the annular clearance between the piston and the cylinder wall.

Apparently different types of deposits brought to the chemical laboratory for analyses from locations in the engine where temperatures differ widely, sometimes give surprisingly similar analyses.

Organic acids formed by oxidation may be quite soluble in naphtha and still play an important role in the formation of engine deposits. The same can be said of arrested combustion products of the fuel which reach the crankcase. The ash of an engine deposit may be quite important.

Micro and microscopical analyses are very helpful and X-ray diffractions are especially valuable because of the positive identifications that are possible by those methods.

Lacquer deposits are enigmas in many ways; they form on almost any part of the motor except the combustion chamber.

Probably all internal combustion motors have some arrested combustion, particularly in the annular space between piston and cylinder wall; compounds of an aldehyde nature are probably formed. It is not unreasonable to expect that the presence of such compounds in internal combustion engines would lead to the formation of such lacquers as are observed in engines.

Other engine deposits for which the fuel is responsible spoken of as "sludge" frequently are charged against the oil. Black soft deposits collect in valve chambers of engines operated in intermittent service during the winter.

Gray or black "muds" may settle from the oil on standing.

Deposits for which the fuel is responsible can only be minimized by obtaining the optimum of combustion efficiency in the cylinders and maintaining an effective ring condition.

Engine Fuel Testing and Proposals for Its Further Development

By DR. ALEXANDER v. PHILIPPOVICH
Director of the Institute for Fuel Research of the German Institute for Aeronautical Research (D.V.L.)

Fuel and lubricant testing must provide reliable bases for approval or disapproval for definite fields of usage. A fully satisfactory test must determine suitability for the widest possible range, that is, it must deal with a characteristic of the material throughout such a range as to permit a judgment of its behavior to be arrived at for all conceivable conditions, even though these conditions are not actually encountered. The approach of test methods to this condition must be the object of all effort; that, in this objective, we should strive toward common viewpoints throughout the world goes without saying.

Even Ricardo attempted to replace and to supplement engine testing with a chemical characteristic, but, like his many successors, he did not attain that goal. The reason for this condition is twofold; first, the combustion in an engine is such a complex phenomenon that a simple characteristic depending upon constants or judgment based on chemical-physical behavior does not take into consideration all the influences that are operative in practice; moreover, no clear definition has yet been arrived at as to what is to be understood by "engine behavior," so that the calibration of laboratory methods is possible only to a limited extent. It can be said that laboratory methods based on integral constants (for example, specific gravity, molecular weight, etc.) are unsatisfactory, while consistent agreement has not yet been attained with those test methods which, taking into consideration differential influences (such as knock suppressors), investigate a particular phenomenon such as spontaneous ignition. The introduction of reference fuels did not make it possible to ignore engine conditions and thereby permit the use of various test engines. Finally the C.F.R. method was agreed upon, and this method soon attained great international prominence; in it controlling conditions were specified and formed the fundamental basis for the measurement of octane numbers. The expensive and extensive C.F.R. tests on the Uniontown Hill then led to changes in the method and the establishment of new test conditions because the earlier, test method, now termed the C.F.R. research method, did not give satisfactory agreement with the values obtained in modern automobiles. This latter test method—the C.F.R. motor method—is at the present time the most widespread throughout the world and is also the most exposed to criticism.

The important advantage of using octane number lies in its international acceptance.

To avoid the disadvantages and retain the advantage in the future, at least for a period of transition, it is proposed: (*a*) To retain the motor method; (*b*) to determine, in addition, the octane numbers at 30° C. (86° F.), 50° C. (122° F.), and 100° C. (212° F.) mixture temperature under otherwise similar conditions; (*c*) to record, in each determination, the compression ratio prevailing at the point of incipient detonation; (*d*) to introduce an improved instrument for knock indication, which will give accurate and reproducible values; (*e*) to specify, in appraising fuels for a given engine (according to its temperature characteristics), the temperature corresponding with the octane number requirement or the incipient knockpoint; (*f*) to investigate also, the octane number, in the range of lean mixture ratios.

In testing aircraft-engine fuels various laboratories already have succeeded in obtaining diagrams characteristic of knock behavior through the determination of obtainable power against intake air temperature, excess air, or fuel used.

To make possible the correct choice of fuel for a given engine or type of usage the temperature conditions of the engine must be investigated and this data then must be made the basis for selection of fuel characteristics.

The classification of fuels by means of diagrams covering materials of known composition, again leads back to a one-point measurement, provided the diagram for the material involved is known. To judge a fuel's overall behavior it is required only that the measured point lie on the required line in the diagram.

For the testing of engine lubricating oils on the basis of their ring-sticking tendency it seems advisable also to have a test procedure which measures the time required for ring-sticking under exactly specified conditions over a range of temperatures. For an engine of known temperature condition (mean piston temperature) the applicability of a lubricating oil can then be judged from a diagram constructed as described above to include the temperature condition of the engine in question.

Comparative Utilization of Gasoline, Hesselman, and Diesel Engines

By JAMES E. DeLONG
President, Waukesha Motor Co.

In the commercial vehicle field there were 4,118,815 trucks registered in the United States in 1938, and in addition to this there were 52,000 urban, interurban, and sightseeing buses, making a total of nearly 4¼ million vehicles.

The majority of them—3,828,535—are trucks of less than 2-ton capacity. These are light, inexpensive, low first cost vehicles used in the villages, on the farm, in urban and metropolitan house-to-house short haul, delivery service. Something must be done in this field if we are to effect a great national economy by the use of an oil engine.

In the eastern division, from which official figures have been obtained, there is a total on record of but 750 Diesel vehicles while the central division and the western division together account for 1,471, making a total reported of only 2,221 Diesel powered highway vehicles.

As a fuel oil engine, it still enjoys the advantages of lighter weight, very much lower pressure—it is a throttling engine—greater smoothness, much lower maintenance, and actual fuel economies that are equal of some Diesels, compared with those Diesels which might possibly show a better fuel economy.

Control Problems as Affected by Regulator Design

By A. J. FOLEY
Hamlon-Waters, Inc.

The probem of regulator freeze-ups, when operating on large pressure reductions, has been troublesome with many of the transmission and distributing companies during the past. Until recent years there was no convenient means of forecasting in advance whether a regulator would freeze, under definite operating conditions, without making costly laboratory experiments on the actual gas to be controlled. Since Hammerschmidt's research established the freezing temperatures of hydrocarbon hydrates at various pressures, and M. A. Hardie, Jr., promulgated his empirical rule of thumb, that for each atmosphere of pressure reduction there would be a 1° F. drop in temperature, it is now possible to determine, with reasonable accuracy, in advance, whether or not a regulator will freeze when operating at certain conditions of pressure and temperature.

Chart 1 has been constructed utilizing the findings of these two authorities. From Hammerschmidt's curve we arrive at the right hand curve establishing the boundary to the freezing zone of hydrates. Using Hardie's rule of thumb, we establish the down slant lines from the absolute pressure line on the left, to either the temperature line at the bottom, or the curve bounding the freezing zone. On this chart is indicated the following problem. With the upstream gas at 85° F. temperature and 1,015 lb. abs., how large a pressure reduction can be made without a tendency for the hydrates to freeze? Extending the dotted line from the 1,015-lb. abs. pressure horizontally to 85° F., we establish point *A*. From this point follow the down slant line until it intersects the freezing curve at point *B*. This indicates that at a reduced pressure of 565 lb. abs., the temperature of the gas has dropped from 85° F. to 54½° F., at which point the hydrocarbon hydrates will tend to freeze.

Chart 2 is an extension of the curve on Chart 1, on a higher pressure scale from 1,000 to 4,500 lb. In this connection it is to be noted that at 4,500 lb. abs., hydrocarbon hydrates freeze at 100° F. The freezing temperature then is a function of the absolute pressure and bears no relation to the normal freezing temperature of 32° F. The freezing curve on these charts will vary a little for gases of different compositions, and it is, therefore, suggested that the reduced pressure and temperature be kept a bit to the left of the curve.

If it is found that the reduced temperature is below the freezing point for a given pressure reduction, it is suggested that the reduction be made in more than one step, or heaters be installed, as prescribed by Hardie, whichever is more expedient.

In previous literature, Hardie has pointed out "that inasmuch as condition of turbulence on the downstream side delays the conversion of energy of velocity into heat energy, the better the streamline characteristics of the regulator, the less freezeup should be expected." This condition can be accomplished by having the entire pressure reduction occur at the inner valve ports with very little resistance through the body on the downstream side. This helps in keeping ice blown off the seats.

Fig. 1, showing a plan view cross section of a regulator body, illustrates the large area that exists around the integral bridge, and the smaller area at the ports. This construction also makes for greater capacity size for size, with a resultant reduction in investment.

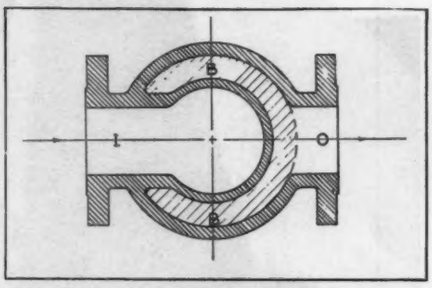


Figure 1

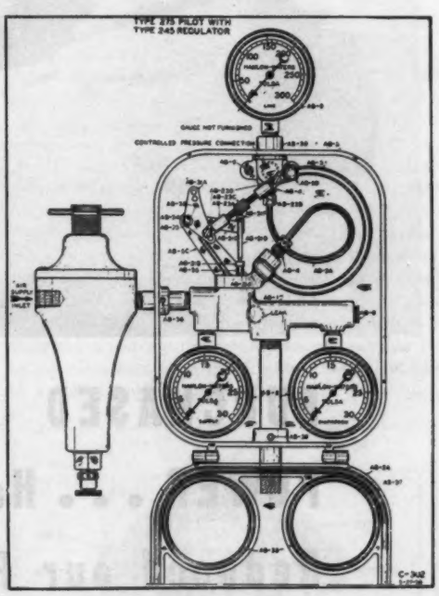
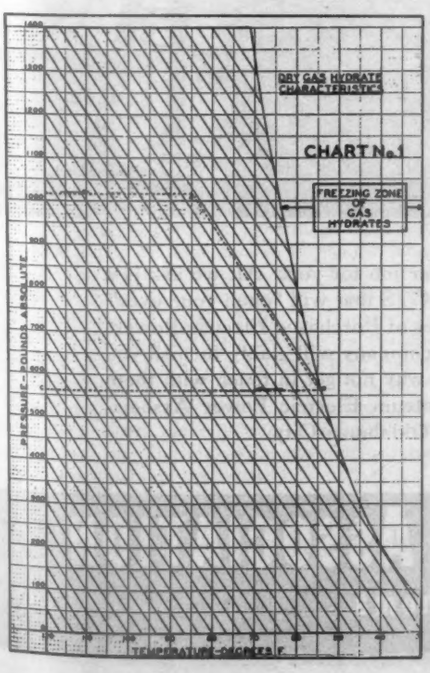
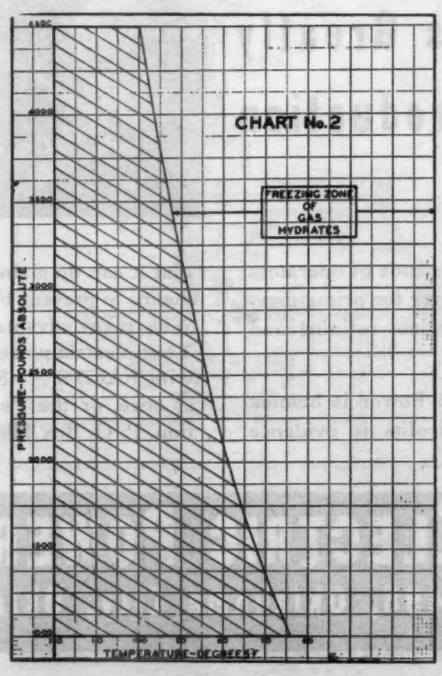


Figure 2





There are many direct diaphragm operated, weight and lever loaded gas pressure reducing regulators in service today. Many of these operating on intermediate and high reduced pressures are not controlling as closely as desired, especially under variable load conditions. This is due to the inherent characteristics of this type, for as the controlled pressure is greater, the diaphragm must be smaller, and the weights increased. The limiting factor on diaphragm sizes is the strength of the material used.

With small diaphragms the overall hysteresis is great, resulting in poor regulation. To replace these regulators with more sensitive types would be costly. They can be sensitized at small expense by installing larger diaphragm heads and mounting a Bourdon tube pressure pilot, of the type

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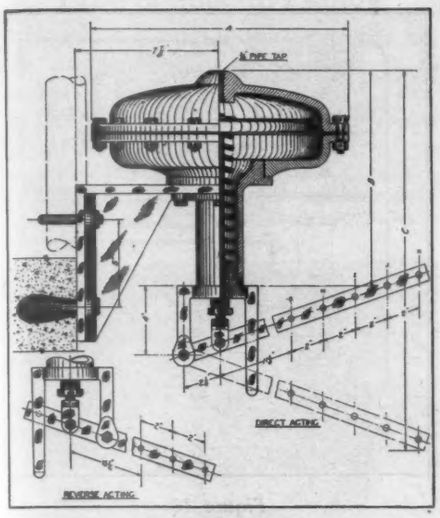


Figure 3

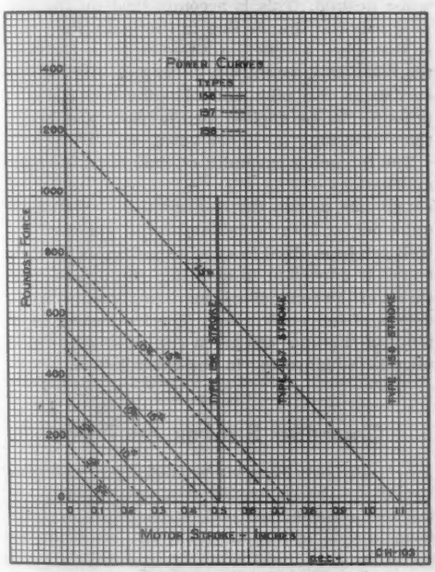


Figure 3A

illustrated in Fig. 2, on top of the diaphragm case. Then, with this arrangement, the reduced or controlled pressure is not in contact with the diaphragm, but instead is only in contact with the controlling Bourdon tube. The maximum pressure applied to the diaphragm, regardless of the magnitude of the controlled pressure, will be 15 lb., which is governed by the setting of the operating medium strainer regulator. The diaphragm head selected should be large enough to put the inner valve through its full stroke with a maximum pressure change on it from zero to 15 lb., and the counterweights so adjusted that the inner valve will be wide open with no pressure on the diaphragm. When a system is equipped with a number of these pilots, very few spare parts need be carried as all parts are interchangeable, and higher or lower pressure range Bourdon tubes can be installed in them. This makes for maximum salvage value and minimum inventory.

For those direct diaphragm operated regulators that have the controlled pressure below the diaphragm instead of above, the Bourdon tube pilot cannot be mounted directly on the diaphragm case as previously described. In such cases it is necessary to utilize a diaphragm motor lever as illustrated in Fig. 3, connecting this lever up to the lever of the existing regulator by means of flexible cable or chain. The Bourdon tube pilot is then mounted on top of the diaphragm motor lever which it actuates. For this hookup it is not necessary to change the diaphragm head on the existing regulator, but sufficient weight must be put on the lever to hold the inner valve wide open with the reduced pressure applied below the diaphragm through the original control line which should still be used, and with no pressure on the diaphragm of the lever mechanism. The flexible cable or chain between the two levers serves as a safety device, for if there is any failure of the pilot or diaphragm motor lever, the motor lever will assume its lowest position, and the existing regulator will continue to function at a safe high pressure. Although when this occurs the regulation will not be very sensitive, it will serve as a temporary expedient until the necessary repairs can be made, and makes for continuity of service.

Another method by which the last mentioned type of regulator can be sensitized is by converting it to the pressure loaded type as illustrated in Fig. 4. This is accomplished by removing the lever and weights, and installing a larger diaphragm case, and mounting the pilot loader, illustrated in Fig. 5, on top. When this type of regulation is used, it is advisable to install a differential relief valve as illustrated in Fig. 6, across the main diaphragm to prevent excessive differential pressures that might prevail in an emergency from rupturing the diaphragm.

In general, pilots serve as amplifiers in that they receive a small impulse and through some outside motive power magnify it to a point where sufficient force is available to operate mechanisms.

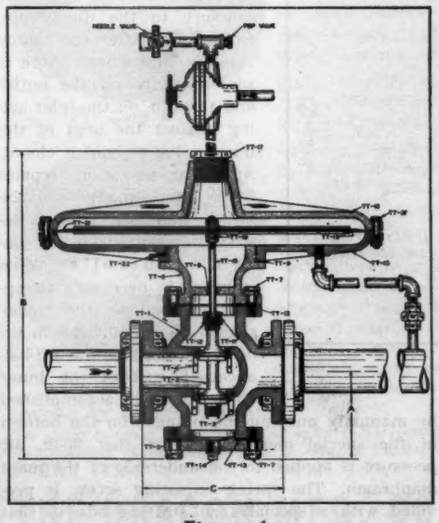


Figure 4

After having covered some of the more common applications, we will now endeavor to present a few of the more or less special applications of automatic controls for the gas industry.

In some localities it is desired to mix a rich and lean gas, or gas and air, in order to have a resultant mixture having its heating value within fixed limits. This can be accomplished by the use of an equal pressure regulator and mixing valve as illustrated in Fig. 7. The manually operated mixing valve is set for the desired ratio between the two gases and the equal pressure regulator automatically maintains the inlet pressures to each port of the mixing valve the same, although not a constant, pressure. Inasmuch as the mixing valve has a common outlet, the pressure drops across

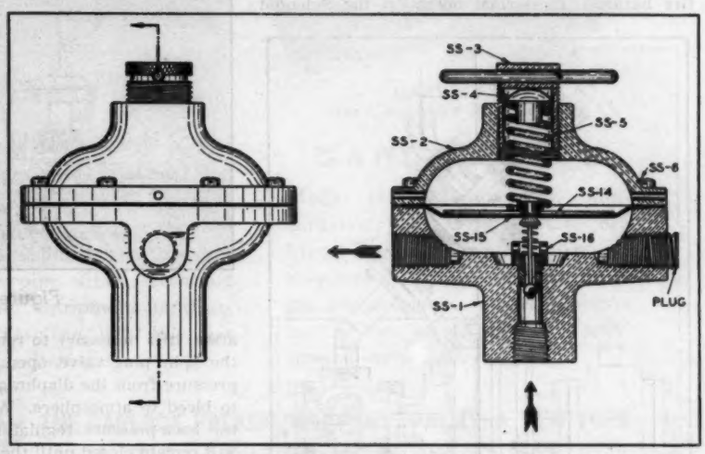


Figure 5

each port of the mixing valve will be equal, and, therefore, the ratio of mix will be governed by the setting of the mixing valve. The control is not disturbed by variations in either or both upstream gas pressures ahead of the equal pressure regulator. For installations that require full automatic control, varying the ratio of mix in order to produce a mixture of constant heating value when the two gases vary, the mixing valve can be provided with a diaphragm top works and actuated by air impulses received from a control calorimixer, that is, taking a continuous sample of the mixed gas.

The control arrangement illustrated in Fig. 8 is designed to prevent the resumption of gas pressure to the consumer after the pressure has failed due to a line break or other emergency. The high-

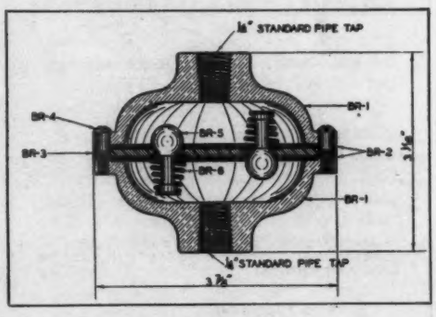


Figure 6

pressure regulator on the left is for making the first cut and the low-pressure regulator on the right is for the final reduction. The safety regulator, between these two, closes whenever the intermediate pressure falls below 20 lb. and remains closed even after normal line pressure is resumed. To reopen the safety regulator it is necessary to open the lock plug valve to pressure the safety regulator diaphragm, after which it is again closed and locked for normal operation.

The control arrangement shown in Fig. 9 is to provide a convenient means for shutting down the gas-fired boilers from a remote point in case of emergency, and so that the boilers will remain shut down until the controller is manually reset

by duly authorized persons. A 2-in. diaphragm motor valve is installed in the 30-lb. gas line to the boiler burners so that when pressure is applied to the diaphragm it will close. At the same time the gas to the burners is cut off, the application of pressure to the diaphragm on a 1-in. diaphragm motor valve on a 200-lb. steam snuff line opens it, allowing this steam to enter the firebox of the boiler and thereby expelling or blanketing all combustible gases that are present and eliminating any fire hazards. In normal operation the Solenoid

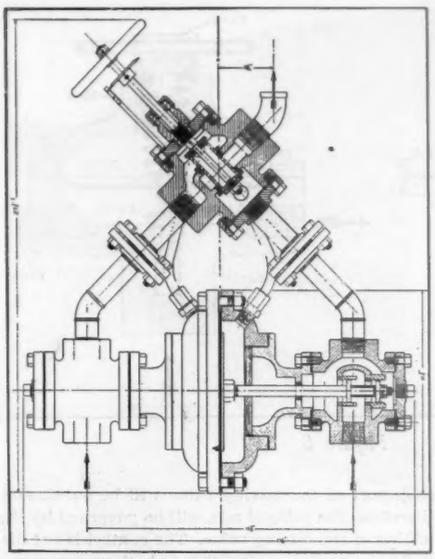


Figure 7

valve is deenergized, and therefore there is no pressure on the diaphragms of the two controlled valves. In case of an emergency, a switch at a remote point is thrown, which energizes the three-way Solenoid valve and cuts off the bleed and allows 30-lb. air pressure to be applied on the diaphragms of the controlled valves, shutting off the

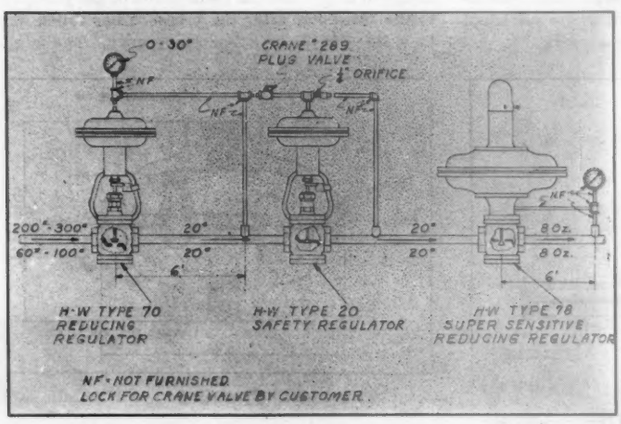


Figure 8

gas and opening up the stream. In a bypass line around the above-mentioned Solenoid valve is installed a ¼-in. back-pressure regulator. This back-pressure regulator is installed backwards in the line. Then, when the 30-lb. air pressure is applied to the motor valves, the same back-pressure regulator will open when 20 lb. is reached, and consequently will remain open at 30 lb. and will allow the 30-lb. incoming air pressure to be continuously applied to the diaphragms of the motor valves even though the Solenoid valve should be again deenergized. In order to reset these controls to the original starting point for emergency operation, it is necessary to remove the padlock from the ½-in. plug valve, open it, and allow the 30-lb. pressure from the diaphragm of the motor valves to bleed to atmosphere. When 20 lb. is reached, the back-pressure regulator will again close and will remain closed until the piping is bled down to zero pressure. The plug valve is then locked and the control system is ready to again function in an emergency.

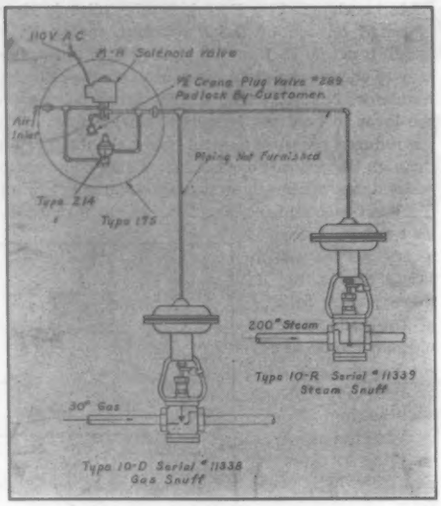


Figure 9

The emergency control in Fig. 10 is provided with a stop valve with a 2-in. forged steel body having a 1⅜-in. inner valve and the end flanges provided with ring joints. The stop valve is installed on the incoming high-pressure wet gas line from the field to the gasoline plant. The pilot is set for 1,000-lb. pressure. In normal operation with 1,500-lb. gas pressure on the line the 2-in. motor valve is always wide open. However, in case of an emergency where any of the piping between this controlled valve and the gasoline plant should break, the pressure on the outlet side of the controlled valve falling to 1,000 lb. would reach the set point of the pilot, and this in turn would apply air pressure to the diaphragm, closing it. After the motor valve is once closed, there is zero pressure on the outlet and 1,500 lb. on the inlet acting against the area of the inner valve to hold it closed. After the necessary repairs have been made on the broken pipe line, and it is desired to again have the diaphragm controlled valve open, it is necessary to apply pressure to the under side of the diaphragm in order to overcome the off-balance effect of the inner valve. This is accomplished by manually pushing the plunger on the bottom of the special manual pilot so that 30-lb. air pressure is applied to the underside of the main diaphragm. The spring adjusting screw is provided with a special type stuffing box so that it will be pressure tight when the air pressure is applied on the under side of the diaphragm. When the plunger on the special manual pilot is released, a spring forces it downward, cutting off the 30-lb. air supply and allowing the pressure on the under side of the diaphragm to bleed to atmosphere. A second emergency closing feature is provided for the main diaphragm motor valve so that it can

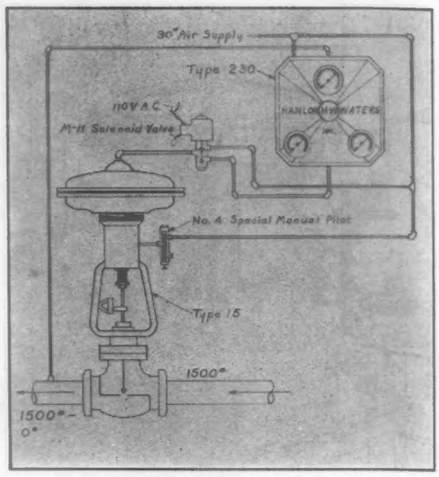


Figure 10

be closed in an emergency from a remote point when desired. This is accomplished by the Solenoid valve in the air line to the main diaphragm so that when a switch at a remote point is thrown the Solenoid is energized, cutting off the air pressure from the pilot and allowing full 30-lb. air pressure to be applied to the main diaphragm, thereby closing the inner valve.

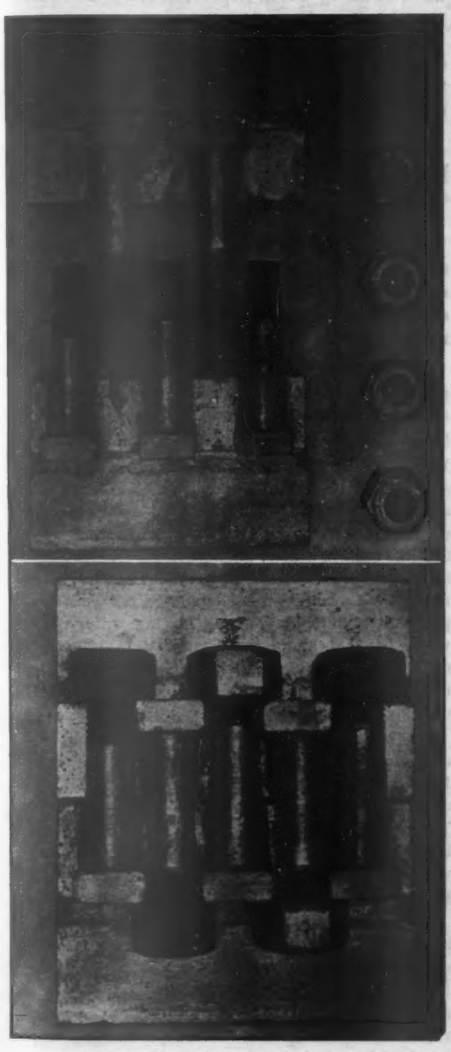
The foregoing examples of common and special applications of controllers may suggest many others similar, or may be modified to suit definite requirements. Many combinations of standard controls can be evolved to satisfy specific applications, and it is important to note that the proper application of the controller is more important than the details of its construction. The increasing importance of this fact has given rise to specialized application engineering in the control field.

Counting Strokes on Pump

A faulty gage may be checked by counting the strokes on the pump, the number of strokes per minute indicating the pressure and any deviation from normal operation. Some drillers count the pump strokes immediately after coming on tour and any increase in speed can then be investigated. On power-driven pumps the revolutions of the motor will indicate the pump speed and any tendency of the prime mover to increase its speed calls for attention.

Compactness Claimed for New Type of Special Flange

Departure from the design used for threaded, faced and drilled flanges has resulted in a more satisfactory and compact flange union for welding on tubular goods and machinery. A smaller outside diameter of the welded flange permits the installation of more pipe in a limited space. A reduction of 122 per cent in weight is also possible through the use of the holeless, welded flange.



bolted union shown here. The upper photo shows the flanges ready for assembly while the lower shows them together.

To make the union, specially designed "T" head bolts are welded to a ring band readily slipped over the end of a pipe and welded.

No holes are required to be drilled or matched in mating flanges. The bolts welded to one flange are spaced so that the bolt ends project between the adjacent bolt heads of the opposite flange, which with the ledge provided by the flange band, provide ample support for the nuts when screwed on the bolt ends. Bolts may thus be spaced much more closely together than is permissible with drilled bolt holes in standard flanges, and the nuts being tightened from opposite sides, ample wrench clearance is provided.

This type of flange union is self-aligning and when nuts are tightened a greater and more uniform unit pressure is applied to the gasket surfaces without excessive bending stresses being applied in the flanges

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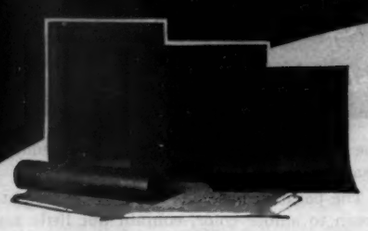

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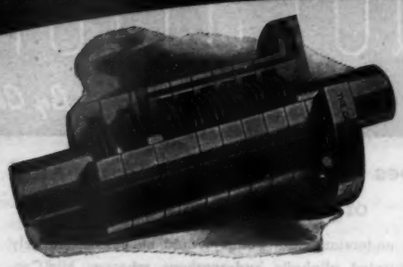

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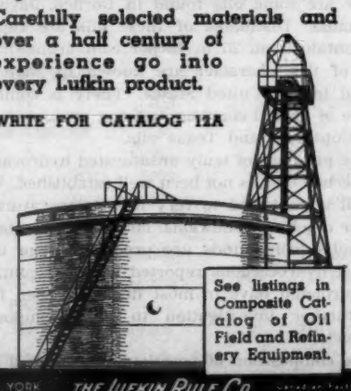

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TAPES — RULES — PRECISION TOOLS

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Types of Petroleum Based on Kind of Carbon Compounds

We understand that Pennsylvania oil consists largely of saturated aliphatic hydrocarbons whereas Mid-Continent oils are somewhat unsaturated and Gulf Coast oils are still more unsaturated, composed largely of aromatic hydrocarbons. We should like to procure a list of hydrocarbons in crude oil, motor gasoline, casinghead gasoline, etc., classified as either aromatic or aliphatic hydrocarbons. Also, a list of fields classified according to saturated or aromatic hydrocarbons.—J. N. S.

The information required to give specific replies to the questions is not available. You have obtained a misconception as to the nature of crude oil so I hope you will find this discussion of some interest.

The composition of the petroleums of the world is essentially saturated hydrocarbons of the paraffin series. No method has been devised for separating a crude oil into its component parts other than by the application of heat. When other hydrocarbons than the saturated compounds are found it is generally admitted that they may have been produced as a result of molecular rearrangement under the influence of temperature.

It is certain that when any oil is distilled each succeeding fraction contains compounds of greater molecular weight, with more carbon and less hydrogen. It appears that all crude oils contain members of the several groups of hydrocarbons. Early investigators supposed that some oils of the type known as Pennsylvania oil consisted of hydrocarbons of the open chain, or methane series. but more recent studies have revealed the presence in such oils of naphthenes and aromatics.

Some oils contain noticeable quantities of the compounds known as naphthenes. These may be ring systems of six, five, four or three carbon atoms. Many oils produced in Texas, Louisiana, and Oklahoma belong to this class, known as naphthene base oils. They frequently contain large quantities of paraffin hydrocarbons. It should be noted that the typical paraffin oils contain some naphthenes.

All petroleum oils that have been examined contain aromatic hydrocarbons but usually in small quantities. There are a few exceptional crude oils that contain large quantities; among these are some oils found in Borneo, Java, and Rumania. Distillates of these oils are reported to contain from 25 to 40 per cent aromatics. No oils of this character are known to have been found in the United States. There is some evidence of phenyl compounds being present in some Mid-Continent and Texas oils.

The presence of truly unsaturated hydrocarbons in a crude oil has not been well established. When an oil is subjected to very high temperatures, as under cracking conditions, large quantities of unsaturated compounds are produced. The unsaturated hydrocarbons reported as being contained in petroleum have in most instances been found on further investigation to be decomposition products.

The composition of petroleum varies to a great extent. Consequently the properties are so influenced that systematic classification is impossible. What has been done is an effort to arrange the crude oils according to some predominating characteristics.

The paraffin base oils are light in weight, often green to amber color, contain but little asphaltic material, are low in sulfur, high in wax and lubricating stock. The second class called mixed base oils is composed of both paraffin and asphaltic or naphthenic oils. These oils vary in weight, some are heavy but others are very light in weight, often are greenish black, contain wax and asphalt, and sulfur is usually present in much larger quantities than in the paraffin base oils. The third type is known as naphthenic. Some are almost free from wax, usually quite dark to black in color, as a rule do not contain large percentage of gasoline, due to the low wax content some of the naphthenic oils yield lubricating oil of exceptional low pourpoints. The sulfur content is commonly high, requiring care in refining. These various types are not found of definite composition over any extensive area. The exact composition frequently changes from pool to pool and often from well to well in the same pool.

Octane Number Viscosity Endpoint and Viscosity Index

Please give me the correct definition of the following terms used in the oil industry: Octane number, viscosity, endpoint, and viscosity index?—C. R. C.

Octane number is a unit used for indicating the antiknock rating of motor fuel. It is based on the fact that isooctane, which does not knock in the engine, and normal heptane, a bad knocker, may be blended to duplicate the knocking tendency of any gasoline. If by test a gasoline duplicates a mixture of 70 per cent isooctane and 30 per cent heptane, it is graded as "70-octane gasoline."

Viscosity, as used in the petroleum industry in the United States, represents rate of flow, expressed in seconds. It is determined by observing the time required for a definite volume to flow through an orifice under specified conditions.

Viscosity index is the viscosity temperature coefficient expressed as a simple function of its Saybolt viscosities at 100° and 210° F. as from 0 to 100. The values may be calculated from formulas, but the simplest method is to determine them from a chart first published in The Oil and Gas Journal by Davis, Lopeyroue and Dean, March 31, 1932, Page 92.

Endpoint is the highest temperature observed during the standard distillation test of gasoline, naphtha, kerosene and similar products. It is sometimes called the maximum boiling point.

Physical and Chemical Laws and Principles Used in the Petroleum Industry

LAW OF GAY-LUSSAC

(Volume or pressure increase with temperature)

If the temperature is raised, without change of pressure, from 0° C. to 1° C. a gas will increase 1/273d of its volume; or, at a fixed volume, the pressure will be increased by 1/273d of its pressure.

This law is also known as Charles' law.

Phenolic Water-Wash Method for Estimating Salt in Crude Oil

The phenol method is recommended for the quantitative determination of salt, chlorides, in crude oil. I do not find this method in the several books I have examined and would thank you to give the details, if you have them.—W. D. B.

Davis, Jones and Neilson have described a phenolic water-wash method for the determination of chlorides in crude oil in a paper presented before the American Petroleum Institute, from which the following is abstracted:

(*a*) Exactly 125 ml. of the oil is placed in a separatory funnel. (*b*) Thoroughly mix with 125 ml. benzene if the oil is very viscous. (*c*) Add 200 ml. boiling water, shake gently. Relieve pressure by opening the stopcock while the funnel is inverted. Add 20 ml. phenol (88 per cent in 12 per cent water) and 30 ml. boiling water, shake well. (*d*) Let stand until more than 100 ml. of clear water has separated. Filter off exactly 100 ml. into a graduated cylinder through two sheets of heavy qualitative paper.

(*e*) If negligible quantities of sulfide and mercaptans are present, transfer the 100 ml. to an Erlenmeyer flask; adjust to 6.5 pH, and add 2 ml. chromate indicator (5 per cent solution K_2CrO_4). Titrate the cold solution with 0.04881 $AgNO_3$ to a light orange endpoint, comparing with a blank of water and chromate. The $AgNO_3$ solution is 8.293 g./1.; = 1 ml. = 20 lb. NaCl/1,000 bbl.

(*f*) Sulfides and mercaptans must be removed before the chlorides can be determined. The 100 ml. from (*d*) is transferred to a 250-ml. beaker, 1 ml. Universal indicator added, and the solution adjusted to a pH of 6.5 — 7.0 (light greenish yellow). The sulfides and mercaptans are precipitated with a slight excess of $Cd(NO_3)_2$ 10 per cent solution. Stand 30 minutes and transfer to a centrifuge tube. Centrifuge to a clear solution and firm mass. Decant to a Erlenmeyer flask, filtering if necessary. Rinse the beaker with 10 ml. water into the centrifuge tube. Thoroughly wash the precipitate by shaking and recentrifuge. Decant into the solution in the Erlenmeyer and adjust to 6.5 pH (yellow). Titrate for chlorides as under (*e*).

Calculation—(ml. $AgNO_3$ — ml. blank) × 20 = 20 lb. NaCl per 1,000 bbl.

Notes: (*b*) With most sweet crude oils the Cd separation is necessary. (*d*) The B.D.H. Universal indicator (British Drug House, Ltd.) is recommended as it permits adjustment to both 6.5-7.0 and 6.5 pH. At the latter it is a clear yellow, which does not interfere with the chromate indicator.

Reference: L. L. Davis, J. M. Jones, C. A. Neilson. Laboratory Control of the Corrosion of Distillation Equipment and of Desalting Processes, Amer. Pet. Inst. Proc., III, 19, 70, 1938.

FIELD OPERATIONS

Summarizing the Week's Developments

OKLAHOMA—A gas well on the west side of the Cement field, Caddo County, blew wild for 22 hours and had two explosions, one resulting in the death of a man. Gas volume was estimated at 276,847,000 cu. ft. The Kiowa County pool opener of the preceding week was tested, flowing 65 to 75 bbl. of oil an hour through tubing. An old wildcat in Garvin County opened a gas area. A small pool opener in southeastern Oklahoma County was completed.

KANSAS—An Arbuckle lime pool was opened in the Ellinwood district, Barton County. The East Neidenthal pool, productive from Arbuckle lime, and the Mudd pool, producing from Lansing lime, were opened in Russell County. Lansing production was uncovered in South Burnett pool, Ellis County, other production being from Arbuckle zone. The Hittle pool, Cowley County, was extended ¼ mile southwestward.

ILLINOIS—The Salem field in Marion County yielded a 6,000-bbl. well, drilled by W. C. McBride, Inc. Five other Salem wells were rated variously from 1,000 to 2,800 bbl. per day. All were McClosky lime producers. A new production record was established in the state.

TEXAS: Gulf Coast—The recently opened Aldine field, Harris County, was defined on the southwest, 1,500 ft. from the discovery well.

Southwest Texas—New pools were opened in Nueces, Starr and Webb counties. The Rincon distillate field in Starr County received its first crude oil production.

West Texas—The Foster pool, Ector County, was extended ½ mile to the north by Lee Drilling Co. No. 1 Johnson.

West Central Texas—Pools were opened in Coleman, Shackelford, Eastland and Young counties. Five wildcats were started in Jones County. The Coleman County discovery well flowed 225 bbl. in 2½ hours. The east side of the Griffin pool, Jones County, was extended by a 528-bbl. well.

Eastern Texas—Locations for wildcats have been staked in Camp, Ellis, Freestone and Leon counties. Lease trading and the assembling of drilling blocks indicate future exploratory work in the district. The new Mabank pool in Henderson County is being extended. The Navarro Crossing pool was extended 1 mile north. A test in Kaufman County was dry and abandoned.

LA-ARK-TEX—Permits for 25 drilling wells in the new Golden Meadows pool in La Fourche Parish, coastal Louisiana, will be followed by the unusual spectacle of a town lot campaign in that part of the state. The second well in the field, recently completed, is a mile from the discovery well. Five new wells are scheduled for the University field in East Baton Rouge Parish. The Magnolia pool in Columbia County, Arkansas, has three new wells averaging 690 bbl. per well. in initial production.

MICHIGAN—New wells increased Michigan's potential production 13,500 bbl. per day.

CALIFORNIA—Production in California was lowered to 614,500 bbl. per day. Successful completions in the west end of the Montebello field have given it a new lease on life. A 3,000-bbl. well was completed in Rio Bravo, and a 2,115-bbl. well in the Canal field.

Completions in All Fields

(Week Ending May 27, 1939)

	Oil	Gas	Dry	Total	1939 total comp. to date	1938 total comp. to date
N. Y., Pa., and W. Va.	41	13	2	56	1,220	1,712
Ohio	7	7	3	17	360	361
Indiana	1	0	0	1	74	38
Kentucky	4	1	7	12	242	314
Illinois	60	0	14	74	1,329	390
Michigan	18	1	14	33	497	314
Kansas	15	0	4	19	441	728
Oklahoma	33	4	10	47	722	701
Texas:						
North Central Texas	29	1	27	57	938	1,289
West Texas	45	0	3	48	754	953
Texas Panhandle	6	3	1	10	156	261
East Texas	8	0	0	8	212	945
East Central Texas	4	1	6	11	105	149
East Texas Border	0	0	0	0	27	69
Gulf Coast Texas	18	2	6	26	553	510
Southwest Texas	36	3	7	46	965	867
Total Texas	146	10	50	206	3,710	5,043
North Louisiana	0	2	3	5	210	229
Gulf Coast Louisiana	7	0	2	9	228	194
Total Louisiana	7	2	5	14	438	423
Arkansas	5	0	0	5	94	107
Montana	3	0	0	3	52	31
Wyoming	1	0	0	1	39	69
Colorado	0	0	0	0	3	3
New Mexico	7	0	3	10	239	238
Utah	0	0	0	0	0	0
California	12	0	3	15	379	558
Total United States	360	38	115	513	9,839	11,030
Total previous week	380	46	138	564		
Week ending May 28, 1938	413	45	80	538		

Outstanding Fields—Highlights

(Week Ending May 27, 1939)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
E.M.A.	34	51	4	3,140	999	24,697
Wasson-Bennett	18	42	0	0	287	10,596
Ector County	9	54	9	6,354	1,698	47,350
Winkler County	4	11	7	3,383	1,803	39,198
Howard-Glasscock	4	10	0	0	1,069	17,150
East Texas	10	24	8	383	25,888	446,247
OKLAHOMA						
St. Louis	6	26	5	1,525	827	37,250
Cement	4	10	2	1,252	258	5,100
KANSAS						
Barton County	4	16	1	3,000	426	13,040
Ellis County	4	12	1	440	383	11,005
Rice County	3	25	2	321	1,316	30,835
Russell County	4	24	3	2,460	1,235	22,050
NEW MEXICO						
Lea County	8	68	7	1,253	2,125	107,000
LA-ARK-TEX						
Cotton Valley, La. (deep)	0	6	1	570	128	13,190
Magnolia, Ark.	0	11	3	2,075	24	6,405
Jennings, La.	1	3	1	160	140	25,436
MICHIGAN						
Freeman-Redding	6	30	2	3,300	87	13,846
Van Buren County	9	50	6	1,830	225	14,918
ILLINOIS						
Central Illinois	41	363	60	18,308	3,132	210,433
CALIFORNIA						
Wilmington	5	21	2	1,726	633	90,300
KENTUCKY						
Birk City	2	11	0	0	126	3,000

Illinois and Kentucky

By STAFF CORRESPONDENT

McBride's 6,000-Bbl. Well Makes New Illinois Record

MATTOON, Ill., May 29.—A well rated at 6,000 bbl. per day following a 4,000-gal. acid treatment in McClosky lime was the prize completion of the week in the basin fields of Illinois. The well was W. C. McBride, Inc., No. 6 Lee, SE NE SE Section 29-2n-2e. The well flowed 725 bbl. in 12 hours, natural flow, but the acid treatment resulted in the best production any well has shown in the state since the present campaign of operations started. It was turned into the pipe line immediately after completion and is reported to have flowed 6,000 bbl. a day, choked down, in the first three days, and was going strong at the close of that period, since which no report has been received.

Sixty oil wells were completed in the state in the week, and 14 dry holes, a total of 74 completions. Dry holes were drilled in Gallatin, one; Saline, one; Jefferson, one; Marion, one; Clay, one; Fayette, two; Montgomery, one; Coles, two; Shelby, Richland, Clinton and Effingham, one each.

Washington County had one oil well with 54 bbl. initial production; Jefferson, two wells, 290 bbl.; Monroe, 1 well, 40 bbl.; Clay, five wells, 1,491 bbl.; Coles, one well, 5 bbl.; Richland, two wells, 403 bbl.; Marion's 25 new wells are credited with 16,779 bbl. initial production but the Texas Co.'s completions were produced only 3 hours on their first day, and several other wells were given only short time flows.

Fayette County's 23 new wells are credited with 6,596 bbl. but some of them flowed only a short time initially.

Following were the completions of the week by counties the initial production representing 24 hours where not otherwise given:

In Gallatin County, Coates and others No. 1 Green, SW cor. Section 16-9s-9e, was abandoned at 2,672 ft., after finding McClosky lime topped at 2,615 ft. barren of oil, and testing several upper formations with no good results.

In Saline County, Kingwood Oil Co. No. 1 McIntyre, NW cor. Section 25-9s-7e, was dry and abandoned at 2,712 ft. Fredonia lime was topped at 2,565 ft.

In Washington County, Magnolia Petroleum Co. No. 7 O. W. Francis, SE SE SW Section 15-3s-3w, Benoist sand at 1,284-98 ft., shot with 10 qt., pumped 54 bbl. of oil and 18 bbl. of water.

In Jefferson County, Armstrong and others No. 1-B Scott, SE NE NW Section 23-3s-2e, dry and abandoned at 2,844 ft.; McClosky lime topped at 2,804 ft.

In Monroe County, Ames Oil Co. No. 2 Gukmershelmer, SW NE NW Section 2-2s-10w of fourth principal meridian, acidized with 500 gal. at a total depth of 431 ft. and pumped 40 bbl. in 8 hours but later pumped 20 bbl. of oil and a lot of water in 24 hours.

In the Dix pool in Jefferson County, Carter Oil Co. No. 2 Copple, NW SE SW Section 4-1s-2e, Bethel sand at 1,938-45 ft., shot with 10 qt., pumped 152 bbl. Carter Oil Co. No. 2 Cunningham, C E½ NE SW Section 3-1s-2e, Bethel at 1,988-95 ft., shot with 10 qt., pumped 138 bbl. of oil and about 6 bbl. of salt water.

In the Salem Pool

In Marion County, Salem pool, Texas Co. No. 14 B. Hawkins, NE NE NW Section 8-1n-2e, McClosky pay at 1,974-2,000 ft., flowed 46 bbl. in 3 hours; acidized with 3,000 gal., flowed 156 bbl. in 3 hours and estimated at 1,092 bbl. per day. Texas No. 11 B. Hawkins, SE NE NW Section 8-1n-2e, Benoist at 1,840-70 ft., pumped 33 bbl. in 3 hours, estimated at 231 bbl. per day. Texas No. 1 A. Richardson, NE NW NE Section 7-1n-2e, Benoist at 1,716-50 ft., flowed 64 bbl. in 3 hours, rated a 448-bbl. well. Texas No. 6 Johnson, SE SW SE Section 6-1n-2e, SE SW SE Section 6-1n-2e, Benoist at 1,711-45 ft., flowed 47 bbl. in 3 hours, rated a 327-bbl. well. Texas No. 29 City of Centralia, SW SW SW Section 4-1n-2e, Benoist at 1,798-1,828 ft., pumped 35 bbl. in 3 hours, rated a 245-bbl. well. Texas No. 2 B. Langford, SW SW SW Section 4-1n-2e, Benoist at 1,812-38 ft., flowed 25 bbl. NE NE Section 4-1n-2e, Benoist at 1,873-92 ft., pumped 41 bbl. in 3 hr., rated a 287-bbl. well. W. C. McBride, Inc., No. 6 Fyke Heirs, SW cor. NW SW SE Section 3-1n-2e, abandoned at 1,930 ft. because of a crooked hole which extended under another company's lease.

In the City of Centralia district, W. B. Dallas and others No. 1, SE cor. Section 25-2n-1e, McClosky lime top at 2,098 ft., total depth 2,123 ft., dry and abandoned. Menhall and others No. 1 Hazelwood, NE cor. SW Section 8-2n-1e, salt water in Benoist, Aux Vases and Fredonia, total depth 1,806 ft.; shut down for orders.

In the north end of the Salem field, Shell Oil Co. No. 1 Young Heirs B, NW NE SE Section 20-2n-2e, McClosky lime at 1,920 ft., total depth 1,960 ft.; drill pipe was lost in the hole which had to be abandoned. Texas Co. No. 3 W. Sands, SE NW SW Section 33-2n-2e, Benoist at 1,805-65 ft., flowed 46 bbl. in 3 hours, rated at 322 bbl. per day. Texas No. 3 Farthing, SW NE SW Section 33-2n-2e, Benoist at 1,810-50 ft., flowed 47 bbl. in 3 hours, rated at 329 bbl. per day. Baldwin No. 4 Holmes, NE SW NE Section 33-2n-2e, Benoist at 1,818-65 ft., shot with 35 qt. on bottom, flowed 500 bbl. Texas No. 8 Stonecipher, NE SW SE Section 32-2n-2e, Benoist at 1,747 ft., total depth 1,804 ft., flowed 60 bbl. in 3 hours, rated at 420 bbl. per day. Texas No. 2 B. Frederick, NE SW NW Section 29-2n-2e, Benoist at 1,799 ft., Renault at 1,835 ft., Aux Vases at 1,856 ft., total depth 1,894 ft., pumped 26 bbl. in 3 hours, rated at 182 bbl. a day. W. C. McBride, Inc., No. 6 Lee, SE NE SE Section 29-2n-2e, McClosky lime at 1,951-59 ft. and 2,014-47 ft., flowed 725 bbl. in 12 hours, acidized with 4,000 gal., flowed 258 bbl. in 1 hour, rated at 6,000 bbl. per day. Texas Co. No. 12 D. Young, SW SW NW Section 21-2n-2e, McClosky at 1,990-2,058 ft., at intervals, flowed 120 bbl. in 3 hours, rated at 840 bbl. per day. Texas No. 4 Shanafelt, N½ NE SW NE Section 21-2n-2e, Benoist at 1,851-62 ft., flowed 24 bbl. in 3 hours, rated at 148 bbl. per day. Magnolia Petroleum Co. No. 21 Shanafelt, NE NW NE Section 21-2n-2e, McClosky lime at 2,040-82 ft., acidized with 2,000 gal., flowed 480 bbl. a day. Texas No. 6 N. Young, NW cor. SE NE Section 20-2n-2e, McClosky at 1,942-2,014 ft., acidized with 3,000 gal., flowed 75 bbl. in 3 hours, rated at 525 bbl. per day. Shell Oil Co. No. 4 Young Heirs A, SW NE SE Section 20-2n-2e, McClosky at 1,937-68 ft., in streaks, flowed 1,224 bbl. naturally. Shell Oil Co. No. 9 Young Heirs, NW NE SE Section 20-2n-2e, McClosky at 1,947-96 ft., flowed 750 bbl. in 12 hours, rated at 1,050 bbl. per day. Shell No. 1 Salem State Bank A, N½ NE NW SE Section 20-2n-2e, McClosky at 1,912-24 ft. and 1,947-66 ft., flowed 350 bbl. in 12 hours; acidized with 5,000 gal., it flowed 840 bbl. in 24 hours. Magnolia No. 38 J. H. Young, NE cor. SE Section 20-2n-2e, McClosky at 1,938-98 ft., with saturation in streaks, acidized with 4,000 gal., flowed 2,880 bbl. Magnolia No. 36 Young, SE SE SE Section 20-2n-2e, McClosky at 1,947-52 ft., total depth 2,050 ft., acidized with 4,000 gal., flowed 120 bbl. per hour. Potter Brothers No. 5 M. & I. Railroad "A," SW NE SE Section 16-2n-2e, Benoist at 1,848-88 ft., shot with 40 qt., pumped 288 bbl. per day. Magnolia No. 26 W. O. Chitwood, NE NW SW Section 16-2n-2e, McClosky at 2,020 ft., total depth 2,105 ft., flowed 160 bbl. in 6 hours.

In Clay County, Pure Oil Co. No. 1 Alvedia Clay, C E½ NE NE Section 22-1n-7e, Fredonia pay at 3,139-46 ft. and 3,154-65 ft., acidized with 3,000 gal., through perforations at 3,139-52 ft., pumped 24 bbl. of oil and 35 bbl. of salt water. G. A. Manahan No. 2 Fitch, C S½ SE NE Section 10-1n-8e, pay at 3,101-07 ft., pumped 100 bbl. of oil and 12 bbl. of water. Pure Oil Co. No. 1 Gid Miller A, C E½ SE NW Section 4-1n-8e, Fredonia pay at intervals from 3,020 to 3,080 ft., acidized with 5,000 gal., flowed 412 bbl. Pure Oil No. 6 Ullom, C E½ SE SE Section 16-2n-8e, Fredonia pays at 3,010-65 ft., at intervals, acidized with 5,000 gal., pumped 58 bbl. Pure No. 8 Davey Schott, C W½ SW SW Section 5-2n-8e, Fredonia pay at 3,007-90 ft., at intervals, acidized with 5,000 gal., flowed 897 bbl.

Phillips Petroleum Co. No. 1 Murvin, SW SW NE Section 22-5n-7e, was dry and abandoned at 2,981 ft., Fredonia lime was topped at 2,850 ft.

Fayette County Completions

In the St. James pool, Fayette County, Rosenthal and others No. 10 Washburn, SW SW NW Section 30-6n-3e, Bethel sand at 1,727-35 ft., showed water; plugged back to 1,588 ft., pumped 160 bbl. in 24 hours from Cypress sand at 1,566-88 ft. C. E. Lange and others wildcat, No. 1 Bloom, SE SE NE Section 19-6n-1e, had McClosky lime at 1,770-77 ft., total depth 1,794 ft. It was dry and abandoned. Cypress, Bethel, Renault, and Aux Vases sands were dry.

In the Louden field, Jarvis Brothers No. 8 Welker, NW NE SW Section 31-7n-3e, Cypress sand at 1,526-65 ft., shot with 40 qt., pumped 200 bbl. Jarvis No. 7 Welker, NE cor. SW SE NW Section 31-7n-3e, Cypress at 1,553-76 ft., shot with 40 qt., pumped 200 bbl. Jarvis No. 6 Welker, SW cor. NW SE NW Section 31-7n-3e, Cypress at 1,563-80 ft., shot with 30 qt., pumped 125 bbl. Whisenant and others No. 13 Smith, NE SW NE Section 30-7n-3e, Cypress and Bethel sands dry, total depth 1,668 ft., abandoned. Carter Oil Co. No. 4 Taylor, NE NW SW Section 29-7n-3e, Cypress sand at 1,520-62 ft., shot with 30 qt., swabbed 178 bbl. in 17 hours; later swabbed 280 bbl. in 24 hours. Carter No. 6 Ripley, SE NW NW Section 29-7n-3e, Cypress at 1,515-45 ft., shot

Illinois Fields

HIGHLIGHTS OF THE WEEK: W. C. McBride, Inc., which was founded after the death of W. C. McBride, of St. Louis, Mo., one of the largest operators in the old Illinois field, and at the height of his success one of the largest individual producers in the United States, has the largest oil well thus far developed in the new Illinois fields. It was completed in the past week in the Salem field, Marion County, and in the first 3 days flowed 250 bbl. per hour, or 6,000 bbl. per day, choked down. It is a McClosky lime well. Production again hit a new record for 7 days.

Daily average production of new fields, 210,433 bbl.; old fields, 7,615 bbl.; total, 218,128 bbl.

Total operations, including locations, rigs, and wells drilling, 439.

with 40 qt., swabbed 400 bbl. Carter No. 5 Ripley, SW NE NW Section 29-7n-3e, Cypress sand at 1,524-54 ft., shot with 60 qt., swabbed 330 bbl. Stewart Oil Co. No. 4 Durbin, NE NE SE Section 20-7n-3e, Cypress sand at 1,557-75 ft., shot with 40 qt., pumped 200 bbl. Carter No. 7 Fezzel, NE SW NW Section 29-7n-3e, Cypress sand at 1,513-51 ft., shot with 60 qt., swabbed 377 bbl. Carter No. 3 Hackett, NW NE SW Section 20-7n-3e, Cypress sand at 1,526-52 ft., shot with 40 qt., swabbed 357 bbl. in 18 hours, rated at 480 bbl. per day. Mabee Drilling Co. No. 2 Kimbrell, C S½ SW NE Section 19-7n-3e, Cypress sand at 1,520-52 ft., shot with 30 qt., pumped 115 bbl. in 11 hours, later pumped 268 bbl. in 21 hours, and still later pumped 150 bbl. in 24 hours. Carter No. 4 Morrison, SE NE NE Section 19-7n-3e, a 440-bbl. well producing from Cypress and stray sands, after nitroglycerin shots; Cypress at 1,455-77 ft. and stray at 1,481-1,543 ft. Union Products Co. No. 5 Arnold, NE NW SW Section 8-7n-3e, Cypress sand at 1,471-1,516 ft., pumped 209 bbl. Carter No. 2 Williams, NE NW SE Section 7-7n-3e, Bethel sand at 1,568-85 ft., shot with 20 qt., swabbed 304 bbl. Carter No. 5 Deal, N½ SW NE NW Section 6-7n-3e, Cypress at 1,494-1,532 ft., swabbed 340 bbl. Carter No. 3 Clow, NW SW NW Section 5-7n-3e, Cypress sand at 1,406-29 ft., Bethel at 1,492-1,503 ft., swabbed 480 bbl. in 24 hours from both sands.

Carter Oil Co. No. 5 Ireland, NE SE NE Section 32-8n-3e, Cypress sand at 1,426-86 ft., and Bethel at 1,550-81 ft., latter sand shot with 30 qt., flowed 106 bbl. in 8 hours from both sands, rated at 328 bbl. per day. Carter Oil Co. No. 2 Cummings, SE NE NE Section 21-8n-3e, shot with 60 qt. and then with 70 qt. at 1,481-1,500 ft., swabbed 68 bbl. per day. Carter Oil No. 3 Matson, NE NW SE Section 11-8n-3e, flowed 640 bbl. per day from Cypress sand at 1,503-33 ft. and stray sand at 1,594-1,603 ft. Carter No. 10 Larimore, NW SW SW Section 11-8n-3e, swabbed 343 bbl. in 24 hours from Cypress sand at 1,474-1,512 ft., and Bethel sand at 1,584-96 ft., shot with 20 qt. Carter No. 2 Fortner, SW SE NE Section 10-8n-3e, pumped 48 bbl. a day from Cypress sand at 1,510-30 ft., and stray sand at 1,584-98 ft., the latter sand shot with 20 qt. Carter No. 1 Sinclair, SW NW SE Section 2-8n-3e, Cypress sand at 1,495-1,529 ft. and stray sand at 1,578-91 ft., the latter shot with 20 qt., swabbed 400 bbl. in 18 hours, and rated at 500 bbl. per day. Carter No. 1 H. H. Buesking, SE SW SE Section 2-8n-3e, Cypress sand at 1,456-79 ft., and stray sand at 1,498-1,557 ft., shot with 30 qt., swabbed 252 bbl. from both sands.

In Montgomery County, Cassen and others No. 1 Wilkering, NW SW NE Section 34-10n-2w, dry and abandoned at 2,673 ft. What is believed to be Devonian lime was topped at 2,578 ft. Water was found at 2,666-71 ft.

In Coles County, W. R. Miller No. 1 McConnell, SW NW NW Section 23-11n-10e, shot with 15 qt. at 555-85 ft., estimated good for 5 bbl. per day. Same operator's No. 1 Stull, SE SW NE Section 21-11n-10e, hole full of water at 820-25 ft., abandoned. Dee Brothers No. 1 James, NW NW NE Section 12-2n-8e, dry and abandoned at 2,356 ft.; top of the St. Louis lime at 2,320 ft.

In Shelby County, Illican Oil Co. No. 1 Carr, SW SE NE Section 12-13n-2e, dry and abandoned at 2,901 ft.; Devonian lime top at 2,730 ft. Rex Development Co. is reported to have abandoned No. 1 Odell, NE SE NW Section 20-14n-2e, at 575 ft.

In Edgar County, A. M. Myers No. 1 Brinkerhoff, C SE SE Section 26-13n-13w of second principal meridian, dry and abandoned at 1,970 ft.; top of the Niagara lime at 1,901 ft.

In Richland County, Leathers and others No. 1 Yonaka, NW SE SW Section 22-2n-14w of second principal meridian, was abandoned as a failure at 3,062 ft. It had been acidized with 2,000 gal. but only the load was recovered. Pure Oil Co. No. 19 Coen, C N½ SW¼ Section 4-3n-9e of third principal meridian, Cypress sand at 2,583-86 ft., pumped 212 bbl. of oil and 143 bbl. of water in 24 hours. Pure No. 3 Howard Cazel B, NW SW NW Section 25-4n-9e, Cypress sand at 2,565-93 ft., pumped 54 bbl. in 24 hours. Mabee Drilling Co. No. 5 Sparr, SE SE SE Section 23-4n-9e, Cypress sand 2,559-92 ft., shot with 80 qt., pumped 191 bbl.

In Clinton County, W. C. McBride, Inc., No. 1 A. Keister, SE SW NE Section 26-2n-1w, was a hole full of water, and abandoned at 1,467 ft.

In Effingham County, T. D. Henry No. 1 Miller, SW SW NE Section 26-7n-7e, was dry and abandoned at 2,886 ft., Roseclaire lime top at 2,827 ft.

New Wildcat Operations

Saline County: Kingwood Oil Co. No. 1 Allyn, 300 ft from W and 330 ft. from S lines, SW NE Section 11-9s-7e, a rotary rig up. T. D. Hapenny No. 1 Swinney, near C SW SW NW Section 1-9s-7e, rigging up rotary.

White County: A. C. Wilson and others No. 1 Dagley, SE SE SW Section 12-7s-9e, spudded. Meyer S. Marks No. 1 Smith, NW NW NE Section 14-5s-8e, rotary rig up.

Edwards County: Massad and others No. 1 Amy Toops B, NW NE SE Section 13-3s-10e, rotary rig up. C. G. McFadden No. 1 Charles Bump, C SE SW Section 34-2s-14w of second principal meridian, rotary rig up.

Jefferson County: Carter Oil Co. No. 1 Copple, 390 ft. from S and 495 ft. from W lines of NE SW Section 4-1s-2e, location.

Monroe County: J. E. Cummings No. 1 Boyer, NE SW SW Section 19-1s-10w, drilling at 840 ft.

Clinton County: Witcher Development Co. No. 1 Monken, NE cor. SE Section 2-1n-2w, location.

St. Clair County: A. F. Anding No. 1 Gutterman, 30 ft. from S and 400 ft. from E lines of NW¼ Section 31-1n-8w, total depth 229 ft., showing of oil at 212-29 ft., shut down for orders.

Richland County: Kitchen and Wilson No. 1 Wilson, SE SE SE Section 13-3n-9e, rig on the ground.

Bond County: Eason Oil Co. No. 1-A Stock Land Bank, NE NE NW Section 24-4n-3w, 4½-in. casing set at 1,121 ft. Kesl and others No. 1 Satthoff, NE NE NW Section 12-6n-5w, drilling at 2,825 ft.

Crawford County: Denver Producing & Refining Co. No. 1 Kerst White, NW NW NE Section 2-5n-14w of second principal meridian, location.

Macoupin County: American Petroleum Corp. No. 1 Simmermaker, 175 ft. from N and 50 ft. from E lines of NW NW NE Section 22-8n-8e, total depth 417½ ft., waiting for casing.

Shelby County: Kingwood Oil Co. and Continental Oil Co. No. 1 Trueblood, SE SW SW Section 3-9n-5e, drilling at 2,750 ft., top of the Salem lime at 2,465 ft. Zephyr Drilling Co. No. 1 Holmes, SW SE SE Section 6-12n-3e, location.

Moultrie County: Seaboard No. 1 Horn, SW SE NE Section 29-13n-5e, drilling at 2,730 ft.

Christian County: Heidt No. 1 Smith, SW SW SE Section 10-13-1w, underreaming 6-in. casing, total depth 1,115 ft.

Ford County: Nelson Brown and Erp No. 1 Stroh, near NE SE NW of frac. Section 19-24n-7e, rig up.

Wildcat Drilling

Massac County: Marshall Drilling Co. No. 1 McGhee, NE NE NE Section 3-16s-5e, drilling at 765 ft. Kahle and others No. 1 Harvick, SW SW SW Section 23-14s-3e, drilled to 2,994 ft. and shut down.

Alexander County: Bear, Shirk & Morgan No. 1 T. Riggle, SE NW NW Section 35-15s-2w, spudded and shut down.

Johnson County: Tunnell Hill Oil Co. No. 1 Boner, C W½ SW NE Section 30-11s-3e, total depth 1,007 ft., preparing to drill ahead.

Gallatin County: F. R. Jackson No. 1 Turner, SE NW NW Section 27-9s-9e (corrected location), drilling at 2,045 ft. R. L. Fisher and others No. 1 Logan, CEL SW NE Section 20-9s-9e, drilling at 460 ft. R. A. Shiffer No. 1 Williams, SW cor. NW NE NE Section 20-9s-9e, rig up. F. R. Jackson No. 1 McGhee, SW NE NE Section 29-9s-9e, rig up.

Saline County: Coast Producers, Inc., No. 1 Sloan, SE SE SW Section 32-7s-6e, shut down for orders at 2,770 ft.

White County: Eason Oil Co. No. 1 Starns Heirs, SW SE SW Section 14-6s-9e, cored to 2,686½ ft., and drilling ahead; showings of oil in Cypress sand cores from 2,646 ft. to bottom. Mazda Oil Corp. No. 1 Carmi Orphanage, SE SE NE Section 22-5s-9e, total depth 3,228 ft., plugged back to 3,013 ft. and set pipe; will perforate opposite Cypress sand at 2,876-2,900 ft. Sun Oil Co. No. 1 Ford, McClosky lime penetrated at 2,998-3,008 ft., total depth 3,017 ft. "Removable" pipe set at 2,665-2,701 ft. (Cypress sand), drilling plug. Chisam No. 1 Boultinghouse, C W½ SW SW Section 10-4s-14w of second principal meridian, drilling at 1,190 ft. Superior Oil Co. No. 1, SW SW NE Section 26-4s-14w, drilling at 2,490 ft., Glen Dean top at 2,440 ft.

Washington County: Beavers and others No. 1 Lan-

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WESTERN KENTUCKY

OWENSBORO, Ky., May 29.—One small oil well, a 1,000,000-cu. ft. gas well, and six dry holes comprised the completion record of the western Kentucky fields in the past week in review. Thirteen new operations were announced. The completions and new operations were as follows:

Breckinridge County, Cloverport district: Beasley & Allison No. 2 W. A. Basham, location; George Trout and others No. 1 Rosa Ryan, dry hole, total depth 617 ft.

Butler County, Huntsville district: Vickers & Peurifoy No. 1 A. Gardner, dry hole, total depth 171 ft.

Daviess County, Birk City district: Ky-Mo Oil Co. No. 1 Rebecca Boswell, dry hole, total depth 1,918 ft. Major Oil Co. and Palmer Drilling Co. No. 5 Brown-Prudential Insurance Co., dry in McClosky lime, plugged back to 1,285 ft. to make a Jett sand well; No. 6, derrick. Major Oil Co. and Palmer Drilling Co. No. 7 Mirilda Wahl, location. Utica district: Walter Cameron and others No. 1 W. W. Davis, dry hole, total depth 1,705 ft. W. E. Hupp and others No. 2 C. DeLacy, total depth 1,360 ft., lost tools in delayed shot; decided to abandon hole; will skid rig and drill new well. Chenault & Farmer No. 3 G. A. Nation, moving in. Hart & Hart No. 1 William Nantz, 2¾ miles northeast of Rockport, Ind., spudding in.

Ohio County, Friendship Church district: Andrew Teller, trustee, No. 7 Iva Board, dry hole through Barlow sand. Taffy district: Jess Ashby and others No. 2 B. M. Combs, location. Oklahoma district: Vickers & White No. 3 Thurman Greer, 10-bbl. well in Jett sand, total depth 600 ft. Southeast Livermore district: Oliver Jenkins No. 6 Louisville Joint Stock Land Bank, dry hole, total depth 1,310 ft.

EASTERN KENTUCKY

ASHLAND, Ky., May 29.—Four completions, one a dry hole, and the other said to be good wells but accurate production data unavailable here, are included in the report of the week's activities in eastern Kentucky.

In Knox County, Schmidt Oil Corp. has shut down after reaching 4,000 ft. in No. 1 G. W. Hammonds, on Little Richmond Creek. The mark was the contract end of drilling but it is reported that operations will be resumed soon. This is the most important test in eastern Kentucky. A. M. Johnson, geologist for the Standard Oil Co. of Indiana, believes that St. Peter sandstone lies within 100 ft. of the present total depth. He bases his correlation on the Bentonite at 3,351 ft. with a similar well on the structure in West Virginia.

In Knott County, Inland Gas Corp. had reached 2,378 ft. in Maxon sand in No. 208, Lonnie Amburgy land, on Carr's Fork and made location for No. 209 Joseph Pigman, on Troublesome Creek. The same firm is down 255 ft., in slate, in No. 210 H. H. Pigman, on the Right Fork of Troublesome Creek.

In Knott County, the Kentucky & West Virginia Gas Co. is drilling at 2,185 ft. in red rock, in No. 579 Sherwood Osborne, on Little Doty Branch, and is down 2,350 ft. in shale, in No. 5040, on W. H. Hall land, on Four Mile Branch of Jones Fork. The same company is plugging No. 580, on the H. H. Smith land, and will drill a new hole.

In Floyd County, the Kentucky West Virginia Gas Co. is testing No. 5250 William Crider, on Johns Creek, and is building rig for No. 5253, George McKinney land, on Damdeonin Fork of Toler Creek, and is idle at No. 5254, George Kinney land, on Branham Creek, branch of Mud Creek.

In Martin County, Kentucky West Virginia Gas Co. is building rig for No. 5253 Clary Taylor, on Linbark Fork of Coldwater Fork, and is rigging up No. 5255, H. W. Gray land, on Ramey Branch of Rockhouse Fork.

CENTRAL OHIO

MARIETTA, Ohio, May 29.—The Oriskany test in Meigs County, Lebanon Township, being drilled by Roy Proffitt and others on the E. O. Taggart farm, SW¼ of Section 22, was successfully cleaned out after having difficulty with the first shooting. The hole was deepened 5 ft. to 4,428 ft., passing through the bottom of the Oriskany sand at4,425 ft. This gas gaged 43,000 cu. ft. Sand was shot again with 50 qt. without appreciable results; shut down to test. The top of the Oriskany was had at 4,412 ft.

Two fair shallow oil wells were completed in Ashland and Medina counties; out of the crop of gas wells, three of them yielded an open flow of better than a million cubic feet.

In Ashland County, Lake Township, Orville Phelps No. 1 Harry Mosher, Section 22, made 15 bbl. of oil the first 24 hours after a shot in Berea sand at 582-628 ft.

In Athens County, Lodi Township, A. D. Townsend No. 2 C. M. Weatherley, Section 17, is a gas well in second Berea sand, gaging 100,000 cu. ft. open flow; sand, 1,655-61 ft. Rome Township, Section 30, Brooks

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Eastern Field Report

By STAFF CORRESPONDENT

Chestnut Ridge Test Topped Oriskany Sand at 7,699 Ft.

PITTSBURGH, Pa., May 29.—On Chestnut Ridge in Springhill Township, Fayette County, Pennsylvania, the test of the L. J. Houze Convex Glass Co. on the Paul Dunham farm, topped Oriskany sand at 7,699 ft. and shut down to straighten the hole before drilling deeper. With a surface elevation of 2,202 ft., the Onondaga was reached at 7,514 ft., and the cherty zone at 7,536 ft., which gives a lime section at this point of 185 ft., nearly similar in thickness to wells on the structure 10 miles northeast.

The Oriskany, here, is subsea 5,497 ft., or over 1,000 ft. deeper than near the Summit Hotel in South Union Township along Route 40. Part of the added interval is accounted for by an unexpected thickening in the Marcellus. Some gas, about 50,000 cu. ft. a day, was found in the Onondaga as well as a trace of salt water. As this is the first test south of the gas developed in North and South Union townships 10 miles northeast, the completion will be closely watched.

Southwest of this location, a test drilled in 1918 in Winfield district, Marion County, West Virginia, drilled through the Oriskany sand. Starting with a surface elevation of 1,201 ft., the sand was at 7,018-37 ft., or subsea 5,817 ft. No water was found.

In Pleasants County, West Virginia, the deep test of the Columbian Carbon Co. on the N. L. Ervin, Giles Hammat and Edward Hammat heirs consolidation on the Burning Springs anticline, is drilling at 5,269 ft., or 40 ft. in the Oriskany sand and so far void of any showing of oil or gas but bailing about ⅛ bailer of salt water every 2 hours. It is being deepened. A previous test on this structure found over 90 ft. of sand.

SOUTHEAST OHIO

In Medina County, four wells were completed as producers but will not be put to pumping until tested by water pressure or flooding. In Section 13, Chatham Township, Dymo Oil Corp. completed four wells on the W. H. Ripley farm, Nos. 3-A, 4-A, 10-A, and 11-A, and all of them had a good showing with a couple of hundred feet of fluid in the hole. The formation they were completed in is the shallow Berea grit and the depths were 493 ft., 562 ft., 556 ft., and 554 ft., respectively.

In Cuyahoga County, Benedum & Trees are nearing the Newburg sand in the test on the R. G. Williams farm in Highland Heights village, near Euclid, with a depth of 2,797 ft. Their test on the Jesse Killoran farm is drilling at 1,680 ft., on the J. V. Whitbeck farm at 1,634 ft., and on the Parr lot at 2,280 ft.

SOUTHWEST PENNSYLVANIA

In Fayette County, Southwest Pennsylvania, the Nollem Oil & Gas Co. well on the John Tonechki farm in Menallen Township was completed in the Gas sand at 645 ft. It gaged 618,000 cu. ft. a day, initially, and was turned in the line for test. In this vicinity, most of the new gas has been found in the Injun sand from 950-1,150 ft. but north of this well there are several good gas wells in the Gas sand.

In Greene County, Eddy & Johnson deepened No. 2 E. W. Maple, in Wayne Township, to 3,165 ft., with the Bayard sand at 3,064-3,100 ft. and 220,000 cu. ft. of gas at 3,085 ft. The previous Big Injun sand gas now gages 144,000 cu. ft. a day.

In Springhill Township, Greene County, J. H. McNichols & Co. deepened No. 3 J. W. McNichols from 1,420 ft. to 3,300 ft. No deeper pays were found and it will be produced from the Pittsburgh coal, Murphy, and Hieronimus sands. The Pittsburgh coal was at 1,102-08 ft.

In Washington County, Penn Ohio Oil & Gas Co. deepened No. 1 John Russell, in Amwell Township, through the Fifth sand to 3,420 ft. without increasing the gas volume. The Thirty-Foot sand was shot with 30 qt. and now gages 92,000 cu. ft. a day.

In this township, Raymond Orrill and others deepened the test on the Belle Kelsey farm, starting at 1,011 ft. First Salt sand was at 1,380 ft. and 584,000 cu. ft. of gas showed at 1,383 ft. The present depth is 1,393 ft. with the gas holding up.

In the same township, Chivers & Co. are down 1,225 ft. on the Morgan Prigg farm with the Little Dunkard topped at 1,182 ft., and a show of gas at 1,202 ft. The Carnegie Natural Gas Co. is deepening No. 1 W. S. Booth and topped the Gantz sand at 2,649 ft. with about 146,000 cu. ft. of gas a day at 2,700-04 ft., and drilling at 2,733 ft.

In South Franklin Township, Washington County, Harry Williams & Co. are building rig for No. 3 Jason Buchanan. In North Franklin Township, E. H. and J. B. Tague have reached 450 ft. in No. 15 Adeline D. McKennan.

In Mount Pleasant Township, Washington County, the McGuigan Oil & Gas Co., on the Alian Stewart farm, is drilling at 400 ft. In Jackson Township, Butler County, William Pfeifer is still fishing at 1,050 ft. in No. 3 Ira Beane.

In Greene County, Manufacturers Light & Heat Co. is building rig for No. 2 Barnett Wiley, Richill Township. The Equitable Gas Co. has reached 2,441 ft. in No. 3 John Huffman, in Washington Township.

Deep Tests

In Beaver County, Columbian Fuel Co. is drilling at 2,085 ft. in slate and shells in the test on the Abbie Linnenbrink and others farm, in Rochester Township. In Wayne Township, Armstrong County, Peoples Natural Gas Co. had reached 5,778 ft. on the Lowry Martin farm, on the Greendale anticline.

WEST VIRGINIA

In Pleasants County, West Virginia, Mancil Kelley and others completed No. 2 Pauline Hammatt, in Jefferson district, in Berea sand at 1,997 ft. and it is good for a ½-bbl. pumper.

In Boone County, Owen-Libby-Owens gas department completed No. 15 Peytonia Coal Land Co. in Sherman district at 4,214 ft., Brown shale, slate and shells, and it gaged 104,000 cu. ft. a day.

In Braxton County, Pittsburgh & West Virginia Gas Co. completed No. 7675 T. Nottingham, in Birch district, at 1,476 ft. with 490,000 cu. ft. of gas a day at 1,450 ft.

In Cabell County, Bowen Gas Co. completed the second test on the W. S. Childers farm in McComas district, at 3,280 ft. After a shot, it is feeding in the lines 150,000 cu. ft. a day against a line pressure of 160 lb.

In Calhoun County, McIntosh & Grimm completed a gasser on the John R. Lockney farm in Sherman district at 2,298 ft. with Big Injun at 2,247-64 ft. and 2,264-98 ft., and 360,000 cu. ft. of gas a day from the lower pay. It will be shot later. In Center district, W. H. Bickel drilled a second test on the J. W. Holbert farm, through the Berea sand to 2,231 ft., and it was dry.

In Clay County, Pittsburgh & West Virginia Gas Co. completed a gas well, No. 7666 W. M. Duffield, in Otter district, in the Maxton sand at 1,721 ft. It gaged 500,000 cu. ft. a day.

In Gilmer County, the McCall Drilling Co. completed the second test on the J. H. Houghton farm in DeKalb district, at 2,178 ft., the Injun sand, and it is a gas well gaging 285,000 cu. ft. a day.

In Lincoln County, the Big Laurel Gas Co. completed No. 2 Callaway Plumley, in Union district, at 3,525 ft., and a gage of 116,000 cu. ft. a day 24 hours after shot.

Oriskany Gas Field

One well was completed in the Oriskany sand in Kanawha County. In Poca district, the United Fuel Gas Co. completed No. 4814 W. F. Beane at 5,030 ft. with the Corniferous lime at 4,905 ft.; Oriskany 5,012 ft. and a final gage of 8,832,000 cu. ft. a day. The final depth and gage of the company's test on the O. R. Schmittauer farm was 5,145 ft. and 6,048,000 cu. ft. a day.

In Union district, Kanawha County, Ajax Gas Co. completed a well on the Clyde Anderson and others farm, in Brown shale at a depth of 4,100 ft. It was shot and before cleaning out it gaged 200,000 cu. ft. a day.

Outside Deep Tests

In Ravenswood district, Jackson County, Joe Rubin and others are drilling at 450 ft. on the E. W. Brown farm north of Ravenswood. In Washington district, the United Carbon Co. is down 1,875 ft. in No. 4 Elizabeth Ward Perkins.

In Ripley district, Jackson County, Everett Starcher and others have reached 4,950 ft. in the test on the Grady F. Boggess farm, and 1,750 ft. in the test on the D. M. Boggess farm.

New Work

In Boone County, the Owens-Libby-Owens gas department made locations on the R. A. Chambers farm in Scott district, elevation 814.2 ft.; and for No. 4 T. W. Bedford and others, same district, elevation 846.6 ft.; and the Rich Fork Oil & Gas Co. is deepening No. 7 Croft Land Co., in Scott district.

In Braxton County, Pittsburgh & West Virginia Gas Co. made a location for No. 7684 Florence Duffield, elevation 1,114 ft.; No. 7683 Marja Brown Fear, elevation 793.0 ft.; No. 7682 T. Nottingham, elevation 976 ft.; all in Birch district. In Doddridge County, this company made a location for No. 6114 Anna E. Parks, in Southwest district, elevation 991 ft.

In Clay County, Thompson Gas Co. made location for No. 36-T S. W. Bryant, in Pleasant district, elevation 1,157.94 ft. In Doddridge County, O. E. Garrett, Jr., has a location on the Luverna Gainer heirs farm in Greenbrier district, elevation 1,019.9 ft.

In Gilmer County, Cain and Elliott made location for a test on the Scott Williams farm in DeKalb district, elevation 865 ft. In Glenville district, W. H. Satterfield has started drilling on the Ross Sturn farm. In Hancock County, Carl E. Hahn has started drilling on the George Cargo heirs farm in Clay district, and reached 200 ft.

In Kanawha County, Owens-Libby-Owens gas department will drill on the Fred S. Supple farm in Washington district, elevation 840.2 ft. In Logan County, the South Penn Oil Co. will drill No. 56 on the Yawkey-Freeman lease, in Logan district, elevation 1,460.7 ft.

In Marion County, Victor Oil & Gas Co. is deepening D. Parrish heirs test in Lincoln district, and also the E. H. Talkington test, same district. In Marshall County, E. H. Olmstead will drill on the J. F. Hardison farm in Franklin district, elevation 1,200.5 ft.

In Mingo County, Virginian Gasoline & Oil Co. is deepening No. 15 Logan Cannel Coal Co., in Harvey district, from the Maxton sand where it was an oil producer. It is drilling at 1,410 ft. In Kermit district, Kermit Gas Co. is down 2,700 ft. in the McCormick and others test.

In Putnam County, Reishman Oil & Gas Co. will drill on the M. L. Oxley farm in Curry district, elevation 1,010 ft.

In Pleasants County, A. M. Cooper made a location on the D. D. Rawson farm in Jefferson district along Cow Creek, and in McKim district, F. R. Ball on the James Poynter heirs farm, elevation 1,021 ft.

In Ritchie County, Mahaney and Lucas and others have a rig up on the Madge Smith farm in Clay dis-

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Texas and Louisiana Gulf

By NEIL WILLIAMS

Townsite Drilling Campaign in New Golden Meadows Pool

HOUSTON, Tex., May 29.—The first large scale drilling campaign to take place on any of the deep-seated structure in coastal Louisiana was forecast the past week as the Louisiana Department of Conservation granted permits to drill 25 wells in the Golden Meadows field, La Fourche Parish. Permits to drill were granted following the recent completion of Martex Petroleum Corp. No. 1 Falgout Holding Corp. which extended production within the townsite of Golden Meadows. This test was the second well drilled, and was completed in a new sand at 7,925-55 ft. The well is more than a mile northeast of the discovery well, and it is generally believed to be on the apex of the structure which is expected to extend production over the entire townsite. Material is being moved to several locations and approximately 20 rotaries may be drilling in the area within 60 days. A drilling campaign of this type is unusual in South Louisiana in view of the fact that heretofore all deep-seated structure has been controlled by one or a few companies and has usually been developed on a 20- and 40-acre spacing program.

On the Paradis prospect, St. Charles Parish, Texas Co. continues to test No. 1 L. L. and Paradis, and the well is assured of opening the first production in the parish. The well showed for a distillate producer at 10,060-70 ft., and last week tested 2,000 lb. of pressure and 5 bbl. of distillate per hour when tested through perforated casing at 9,840-50 ft. The perforations have been squeezed off and the company is preparing to retest at 9,820-30 ft. Location is in Section 39-14s-20e.

In Iberville Parish, Shell Oil Co., Inc., No. 1 Natalbany Lumber Co., Section 14-20s-23e, has reached the testing stage. This well was drilled to a total depth of 10,542 ft. and is being tested through perforated casing at 9,040-45 ft. Late in the week the hole was being swabbed and it was reported to be showing some salt water. Details of well were not released, although it is reported that one or more sands have been logged.

Locations for two more wildcats were reported. In Plaquemines Parish, Gulf Oil Corp. staked No. 8 State P.P. in Section 18-23e-31e, while in St. Bernard Parish, Carter, Molers & Brian have derrick up in Section 129-14s-14e.

In Allen Parish, Bell Oil Corp. No. 1 J. A. Bel, Section 22-6s-3w, perforated casing at 6,041-50 ft., and on a drill-stem test recovered three stands of oil and 15 stands of oil-cut and gas-cut mud, with salt water. A cement squeeze job has been made and the well was scheduled to be retested over the week-end.

On the China prospect, northern Jefferson Davis Parish, Union Sulphur Co. was preparing to make a production test of No. 1 H. B. Tietje, Section 36-7s-4w. The hole is bottomed at 9,220 ft., and 7-in. casing was cemented at 8,227 ft. after an electrical log was run to bottom. The well is about 6 miles east of a dry hole drilled by the Louisiana Crusader Oil Co., and about the same distance west of the South Elton distillate field.

Shallow Horizon Barren

Humble Oil & Refining Co. No. 6 Devilbiss failed to open shallow production on the south flank of the Roanoke field, Jefferson Davis Parish, and the well is expected to be drilled deeper. Perforations were made at 4,201-04 ft. and the well swabbed salt water with a slight show of oil.

In the Chalkley field, Cameron Parish, Humble Oil & Refining Co. No. 2 Sweet Lake Land & Oil Co. is standing with 7-in. casing set on bottom at 8,614 ft., and the well is in the process of completion. Shell Petroleum Corp. No. 1-A Katherine Bel Hanzen, southeast of production, is bottomed at 9,550 ft. and company is fishing for 463 ft. of casing which was dropped in the hole while casing was being run to bottom. A test is scheduled to be made between 9,050-83 ft., slightly deeper than Humble Oil & Refining Co.'s production to the northwest. Three attempts to complete the well in the discovery horizon failed.

The northwest limits of the Woodlawn field, Jefferson Davis Parish, were apparently defined as Union Sulphur Co. No. 2 Miller is bottomed at 9,460 ft., and has failed to find the 9,300-ft. sand which was opened a few weeks ago by the same company's No. 1 Donovan-O'Connor.

Drilling activity in the University field, East Baton Rouge Parish, showed an increase as five locations were reported. W. V. Bowles staked No. 1 Richard Community in Section 46; George Echols, No. 1 Evans Duplantier in Section 68; George Helis and others, No. 1 Haase Community in Section 64; William Helis, No. 1-D Duplantier in Section 66, and Lisbon-Iberia Oil Co., No. 2 Duplantier in Section 66. The latter company completed No. 1 Duplantier for an initial production of 438 bbl. per day, flowing through a 7/64-in. choke. It is producing from sand at 6,452-72 ft.

On the Chacahoula dome, La Fourche Parish, Sun Oil Co. No. 1 Dodge, Sundberry & Latham, a north outpost, was abandoned in cap rock at 3,222 ft., and location was made by the same company for No. 1 Cypress Lumber Co. in Section 75-15s-15e.

Eola Field Extended

Along the Sparta-Wilcox trend and in the Eola field, Avoyelles Parish, Sun Oil Co. extended production ¼ mile east with the completion of No. 1 E. A. Townsend which flowed 515 bbl. in 19 hours through ¼-in. choke. Tubing pressure was 1,500 lb. and casing pressure 1,600 lb. The hole is bottomed at 8,568 ft. and the well is reported to have logged approximately 20 ft. of oil sand. Amerada Petroleum Corp. announced location for two wells. On the northeast side of the field, No. 1 Avoyelles Bank & Trust Co. will be drilled in Section 5, while 2 miles northwest of production in Section 31 location was made for No. 1 Merchants and Planters. With the completion of Sid Richardson 4-mile 6-in. oil line to the Standard Oil Co. of Louisiana main line at Bunkie, drilling activity in the field during the next few weeks is expected to show a large increase.. The operators in the field are reported to have agreed on a 20-acre spacing program, and a daily allowable of 300 bbl. per well.

The North Crowley field, Acadia Parish, was extended about 1,000 ft. eastward with the completion of Humble Oil & Refining Co. No. 1 Davis. Oil sand was cored at 8,169-80 ft. and the well flowed at the rate of 25 bbl. per hour through a ¼-in. choke.

In Beauregard Parish, Standard Oil Co. of California No. 1 Long-Bell Lumber Co., Section 23-4s-9w, has cemented 9⅝-in. casing at 7,500 ft. The well topped the Cockfield at 6,949 ft. and the hole is expected to be carried deeper. In the same parish, Atlantic Refining Co. No. 1-A Rice Land & Timber Co., Section 22-3s-11w, is drilling in sand and shale below 6,000 ft.

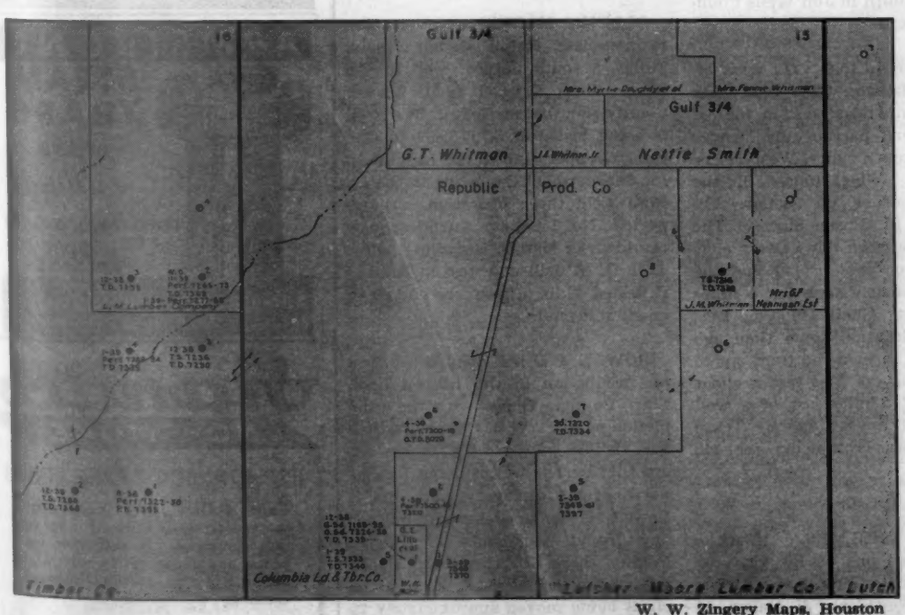
Along the Texas Coast

Along the Texas coast, the newly opened Aldine field, Harris County, was defined on the southwest. Texas Gulf Producing Co. No. 1 O. P. Hairgrove, 1,500 ft. southwest of the discovery well is shut down at 7,089 ft. after coring salt water sand in the discovery horizon at 6,824-34 ft. The Cockfield was topped at 6,529 ft. and salt water sands were cored at 6,670-80, 6,680-6,700 and 6,850-70 ft. Interest in the area is now centered on the same company's No. 1 Heath, about a mile northeast of production which is preparing to core below 6,400 ft.

Additional acreage was apparently opened for development in the Withers-Magnet field, Wharton County, as Smith & McDannald prepared to test No. 1 Mary L. Marti, 1 mile northeast of production in Lots 4 and 5, Block 87, S. Castleman Survey. Sand showing oil is reported to have been cored at 5,540-49 ft. While the well is checking lower than wells in the field proper, it is expected to make a producer.

Location for a 7,800-ft. wildcat was made in the Addicks area, Harris County, by Housh & Thompson

(Continued on Page 66)



W. W. Zingery Maps, Houston

Bancroft field, Beauregard Parish, Louisiana, showing trend of development

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Among the Drilling

GROOVER & ROSE, Albany, Tex., received contracts for two West Central Texas wildcats during the past week, one each being in Jones and Haskell counties. Two miles northwest of Avoca and in the northwestern part of Jones County, the contractors will drill No. 1 Dallas Southard for Noark and his associates. It will seek the Palo Pinto lime pay and has been staked in the southeast quarter of Section 8, D.& D.A. Survey. The Haskell County contract was for E. W. Marland. It will be No. 1 Cobb, Section 96, Block 1, H.&T.C. Survey, in the southeastern part of the county, and will seek the 3,200-ft. pay developed to the south in Shackelford County's Ivy pool and Jones County's Avoca and Griffin pools. Materials have been moved to both locations and spuddings are scheduled over the weekend.

H. F. WHITE, Midland, Tex., has a contract for drilling an edge test to the Wheat pool of Loving County, West Texas. Contract was from Fred Hyer who has staked a location in the L. B. Russel lands, extreme west 40 acres of Section 80, Block 1, W.&N.W. Survey. The test is contracted to 4,200 ft. and materials are being moved to the location.

J. W. GOLDSTON, Houston, Tex., has been awarded contract for the drilling of Vernon G. Schimmel and associates No. 1 R. V. Embleton, scheduled 5,000-ft. wildcat test 1 mile west of Al Smith in Jim Wells County, South Texas.

OSAGE DRILLING CO., with offices in Oklahoma City, Okla., has staked a semiwildcat test in the extreme western part of the Denver pool of Yoakum County, West Texas. Test is No. 1 Shell-Hudson, in the northwest corner of Section 834, Block D, J. H. Gibson Survey. The location is between the western edge of the Denver pool proper and the Roberts extension area for 4 miles further west. Shell Oil Co., Inc., staked the location some time ago but has now farmed the tract out to Osage Drilling Co. The test is about a quarter of a mile east of a well drilled about a year ago by Texas Co. which was completed for 140 bbl. daily.

WALTER HOLMES, Amarillo, Tex., will use one of his rigs for drilling a deep wildcat test with his associates, Newblock & Haley, in Armstrong County, Texas Panhandle. Test is No. 1 Ed Moore, northwest corner of Section 319, Block 4-B, H.&G.N. Survey, southeast of Claude. It will be a 4,500-ft. test drilled with cable tools on a block of 6,500 acres lying between two blocks assembled by Stanolind Oil & Gas Co. Water well has been drilled, the derrick is up, and drilling will commence in the next few days.

PARKER DRILLING CO. has spudded No. 1 Pine Woods Lumber Co., a South Arkansas wildcat for Atlantic Refining Co., about 10 miles southwest of the city of Magnolia. The test will go to the Smackover lime.

REX DRILLING CO., of Shreveport, La., will drill a lower Glen Rose test in the old shallow Waskom field of Harrison County, Texas, for Arkansas Louisiana Gas Co. It will be the third deep test in the field, the preceding being two gas-distillate wells.

RED IRON DRILLING CO. is moving in on an operation of its own, a Cass County, Texas, wildcat, No. 1 N. S. Spearman. The test will go 3,800 ft. to the Woodbine sand.

DELTA DRILLING CO. is operating five rigs in South Arkansas for Lion Oil Refining Co. Three are active in the Magnolia field of Columbia County, and two are beginning in the Schuler field of Union County.

ALLEN & MORRIS are attempting to complete Ralph Ogden No. 3 Miller, a south outpost well in the South Clara Driscoll field, Nueces County, Southwest Texas. The well is being tested at 5,795-5,802 ft. One rotary is operating in the Luby field for Seaboard Oil Co., while in the La Rosa field three operations are reported. No. 1 Person, a wildcat near the town of Mathis, is drilling below 6,049 ft. A drill-stem test at 5,616-15 ft. tested 42 lb. of pressure and 60 ft. of oil and mud.

ROWAN & HOPE opened the first oil production in the Rincon field, Starr County, Texas, with the completion of No. 1 W. I. Cameron which was drilled jointly with Transwestern Oil Co. The well is about 2 miles north of the discovery well, and it flowed 144 bbl. of 41.4-gravity oil per day through ⅛-in. choke. In Hidalgo County their No. 1 Antonio Bazan was abandoned at 7,500 ft., and the rig is being moved approximately 20 miles north of Mission for Shary

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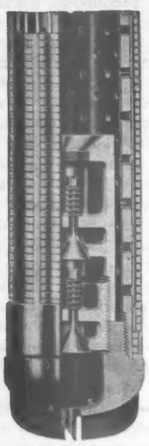

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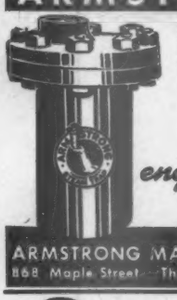

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Maddox No. 1 A. C. Neal, a projected 7,500-ft. hole.

E. C. JOHNSON, drilling contractor, is drilling below 600 ft. on the Erwin & Leach and others No. 1 Wright, third test in the newly discovered Stamps field of Lafayette County, South Arkansas.

WHITMAN DRILLING CO. has moved a rotary to Jackson County, Texas, where a joint test with T. C. Young will be drilled about 1¼ miles south of the West Ranch field. The well is on the R. J. Stephen tract in the R. Musquiz Survey.

SMITH & McDANNALD have cemented casing in No. 1 Mary Marti, 1 mile north of Withers-Magnet field in Wharton County, Texas, which is bottomed in oil sand at 5,549 ft. On the southwest flank of the Danbury dome, Brazoria County, drilling was started on No. 1 Slocum, a projected 9,000-ft. hole. In the Jennings field, Acadia Parish, Louisiana, Shell Oil Co., Inc. No. 6 Conover has been completed for a producer, while at Port Barre in St. Landry Parish, their No. 1 Futral has been spudded.

HOUSH & THOMPSON are moving in a rotary to the Addicks area, Harris County, Texas, for No. 1 L. L. Krey, about 3 miles southwest of Addicks in the B. Herra Survey. The well is scheduled to be drilled below 7,800 ft. In Iberville Parish, coastal Louisiana, their No. 1 Kessler and Folse is coring in sand below 7,850 ft.

HERNDON DRILLING CO. at No. 1 McGlynn, W½ SW SW Section 4-20-9, Rice County, Kansas, drilled to 3,255 ft. in Siliceous lime; potential 902 bbl. of oil.

OLSON DRILLING CO. No. 2 Soldani, NEC NW Section 24-26-4, in the Olson area of northwestern Osage County, Oklahoma, drilled plugs and recemented to shut off gas. The well had been making 5 bbl. of oil an hour and 8 to 10 million cubic feet of gas per day.

FALCON-SEABOARD DRILLING Co. has reached a depth of 10,675 ft. on Gulf Oil Corp. No. 1 Grandison Land Co., a wildcat in La Fourche Parish, Louisiana, which is scheduled to be drilled to a depth of 12,000 ft. In Cameron County, Texas, contract was received from the Salviejo and Pure Oil Co. for a 9,000-ft. test to be drilled on the Gatewood and Dewberry lease in the San Martin grant. Two other operations are reported in the McFaddin field for Barnsdall Oil Co. and at the Saxet field, Nueces County, Texas, for Sinclair Prairie Oil Co.

MARTIN THOMPSON DRILLING Co. is moving in material for a Wilcox sand test in Tyler County, Texas, which will be drilled jointly with Bob Milner and others. The well is on the Cartwright lease in the E. O. LeGrande Survey, about 3 miles northeast of the Joe's Lake field.

GLENN McCARTHY is moving in a rotary to the Chocolate Bayou area, Brazoria County, Texas, for No. 1 Houston Farms Development Co. The well is in the Perry and Austin Survey No. 7, about 3 miles southeast of Chocolate Bayou. The hole is scheduled to be drilled below 8,000 ft.

KIRK-GREENWAY DRILLING CO. No. 1 Kautz, NW SW SE Section 6-18-2, north of the Ramsey pool, Payne County, Oklahoma, was coring in the Hunton lime at 4,699 ft. after passing through 123 ft. of Mississippi. The thickness of the Mississippi was somewhat discouraging as only 100 ft. of this formation had been expected. On the other hand, the test is running 41 ft. higher than in the Sun Oil Co. well, drilling in Section 12-18-1, which was a dry hole.

KINGWOOD OIL CO., contractor and producer, Effingham, Ill., is about to start work on a wildcat for George Burgher in Shelby County, Illinois. The test will be located on the McKitrick farm in Section 31-11-4. The same operator is at work on the first of two wells in Section 13-7-2, Fayette County, on a farmout from the Kewanee Oil & Gas Co. of Robinson, Ill.

FAIN DRILLING CO., Oklahoma City, at No. 1 Wertman, in SW Section 12-15-4e, northeast of the Chandler pool, in Lincoln County, Oklahoma, was drilling around 1,800 feet.

NOBLE DRILLING CO., Tulsa, has been drilling a wildcat for Pure Oil Co. at No. 1 Noble, in NE SE Section 35-3s-1e, 5 miles north of Ardmore, in Carter County, Oklahoma. It was bailed dry after acidizing with 25,000 gal. of hydrochloric acid, the largest amount ever run in an Oklahoma well; it yielded only gas. Operators then shut down for orders. Total depth of the wildcat is 8,485 ft. If acid fails to bring production at the present depth, the pipe will be perforated and tests made higher.

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California Field Report

By
L. P. STOCKMAN

Montebello's West End May Become One of the Hot Spots

LOS ANGELES, Calif., May 29.—The Wilmington field, reflecting aggressive tideland development in the Long Beach Harbor section, heads the development list but may soon be pressed by Montebello where operators appear to be throwing caution to the winds in starting new wells. The latter field has been rather well down the list for almost a year but has taken a new lease on life and within a few weeks will have about 25 strings of tools in operation. In the Long Beach Harbor section of the Wilmington field, Long Beach Oil Development Co. and Signal Oil & Gas Co. are expanding the scope of drilling and both will have several new wells making hole within another 10 days. Long Beach Oil Development Co. should have seven new wells tanking oil within a week. All of these wells will be bottomed beneath the tideland along the ocean front and are being drilled on a contract basis. This company is at present running 10 strings of tools and has derricks up or locations staked for 12 more which are scheduled to be started immediately.

Two new wells and one recompletion were put on production in the Wilmington field of Los Angeles Basin during the week but in keeping with the adopted policy of operators no potential production tests were made. As a result the wells finished only established their ability to produce the maximum allowable. Signal Oil & Gas Co. completed another tideland well when No. 1 C. D. Newport was brought in flowing 1,350 bbl. per day with bottom of the hole at 4,300 ft. This well is flowing 350 bbl. of 14.1-gravity oil per day from the Ranger zone, 500 bbl. of 26.1-gravity oil per day from the upper Terminal and 500 bbl. of 28.2-gravity oil daily from the lower Terminal zone. Security Drilling Co. completed No. 3 Harbor at 2,880 ft. in the Ranger zone and brought it in flowing 256 bbl. of 14.2-gravity oil through a 40/64-in. bean. Superior Oil Co. failing to develop commercial production in the Ford zone in No. 1 Seaside at 5,550 ft. plugged back to the Ranger zone at 2,915 ft. and returned the well to production pumping 120 bbl. of 17.2-gravity oil cutting 2.1 per cent.

Kettleman North Dome

Kettleman North Dome Association, generally referred to as Kenda for brevity, completed No. 54-24-H in Section 24-21-16, Kettleman North dome, flowing 1,354 bbl. of 45.1-gravity oil and 31,740,000 cu. ft. of natural gas per day. The well is far out on the northwest flank of the structure and is producing from the Avenal zone of Eocene age. No. 54-24-H is bottomed at 10,865 ft. and the hole was finished with a 7-in. water string at 10,790 ft. and 100 ft. of 4½-in. liner including 55 ft. of perforated. Top of the productive Avenal zone was logged at 10,794 ft. and the well was brought in flowing through two 96/64-in. beans behind which it showed a tubing pressure of 490 lb. and a casing pressure of 500 lb. This well was originally completed in the Temblor at 8,818 ft. flowing 1,392 bbl. of 33.1-gravity oil. Its present depth is 10,865 ft. Top of the Temblor was logged at 7,893 ft. This is the first good well completed in the Avenal zone in the west end. Superior Oil Co. has a well producing from the Avenal zone in the Huffman section of the field but this well failed to show large production and Union Oil Co. did not go to the trouble of offsetting it. In the eastern section of the North Dome field, Kenda completed No. 6-22-Q in Section 22-22-18 flowing 5,092 bbl. of clean 37.1-gravity oil and 5,165,000 cu. ft. of natural gas per day from the Temblor with bottom of the hole at 7,925 ft. This new well which was brought in flowing through a 65/64-in. bean and showed a tubing pressure of 1,200 lb. and a casing pressure of 1,300 lb. was finished with an 8⅝-in. water string landed at 6,694 ft. and 1,253 ft. of 6⅝-in. liner including 505 ft. of perforated landed at 7,920 ft. and cemented through perforations at 7,400 ft. and 7,645 ft. The eastern end of the North Dome field is looking considerably better than it did during its early life as the first wells were relatively small and did not show as much gas as the west end.

Montebello

After having attracted no attention for more than a year, the west end of the Montebello field of Los Angeles Basin has become a beehive of activity. This area received some attention last year but cooled off again and remained quiet for several months. In the meantime, Wood-Callahan Oil Co., Union Oil Co. and Graham & Loftus started outposts and finished good wells in the east end of the western extension. The successful outcome of this work has attracted more new operators than have ever been in the field and present indications point to the probability that 25 strings of tools will be in operation before the close of a few weeks. It is the opinion of a number of petroleum engineers that extreme care must be used in the development of the east end of the area due to the probability that too many wells may be drilled and thus operators will sustain a loss because ultimate production will prove substantially smaller than expected. With the fifth and sixth zones already badly depleted it is obvious the seventh will not last long if it has the same production characteristics as the upper horizons. These sands are relatively thin and can not possibly sustain intensive development.

Only one well was actually put on production in the west extension of Montebello in the past week, but several additional potential producers are nearing the final stage and should be completed soon. The new well was No. 28 Monterey of St. Helens Petroleum Co., recompleted flowing 820 bbl. of clean 37.5-gravity oil and 750,000 cu. ft. of gas per day after the hole had been deepened to 6,731 ft. The hole was finished with perforations in the 5-in. casing at 6,350-6,450 ft. and at 6,655-6,730 ft. and the well was brought in flowing through a 28/64-in. bean behind which it showed a tubing pressure of 200 lb. and a casing pressure of 650 lb. Pongratz Oil Co. is completing No. 1 Newmark with bottom at 7,641 ft. A formation test made at 7,510-7,641 ft., with the tester open 30 minutes, resulted in fluid to the surface in 10 minutes and clean oil in 15 minutes. The well flowed at the rate of 1,250 bbl. per day along with 5,000,000 cu. ft. of gas. Standard Oil Co. No. 7 Whitehead should also be an early completion as a 20-minute formation test at 7,505-91 ft. showed fluid to the surface in 11 minutes and oil in 17 minutes. The drill pipe recovery was

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	May 20		May 13			
Intercoastal-domestic—	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Crude oil	61,729	8,818	.....	.....	247,520	203,139
Fuel oil	68,095	9,728	64,290	9,184	884,491	.....
Diesel and gas oil	.....	.....	.....	.....	163,501	.....
Gasoline	125,156	17,879	.....	.....	1,138,961	1,106,158
Kerosene	.....	.....	.....	.....	122,200	199,453
Foreign exports—						
Crude oil	232,866	33,267	215,122	30,732	5,585,849	9,930,389
Fuel oil	217,993	31,142	143,146	20,449	3,082,280	3,109,614
Diesel and gas oil	116,132	16,590	157,401	22,486	2,378,446	2,138,996
Gasoline	32,329	4,618	154,425	22,061	3,089,132	2,623,442
Kerosene	.....	.....	36,645	5,235	621,586	499,574
Lubricants	.....	.....	.....	.....	42,034	.....
Coastwise-domestic—						
Crude oil	269,072	38,439	209,511	29,930	4,782,222	4,580,068
Fuel oil	103,353	14,765	115,127	16,447	3,653,355	4,333,374
Diesel and gas oil	50,943	7,278	72,451	10,350	1,030,245	642,206
Gasoline	242,886	34,698	269,698	38,528	5,541,256	5,686,620
Kerosene	3,356	479	.....	.....	168,911	118,286

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal domestic—						
Fuel oil	.....	.....	.....	.....	61,281	.....
Diesel and gas oil	.....	.....	.....	.....	69,550	178,662
Gasoline	.....	.....	.....	.....	.....	9,499
Asphalt	65,795	9,399	74,226	10,604	280,447	284,401
Lubricants	.....	.....	3,001	429	11,184	3,009
Foreign exports—						
Crude oil	185,110	26,444	102,476	14,639	2,228,729	2,305,476
Fuel oil	222,074	31,725	.....	.....	1,107,333	832,223
Diesel and gas oil	115,364	16,481	48,778	6,968	888,274	640,602
Gasoline	10,323	1,475	185,980	26,569	1,296,429	1,676,440
Kerosene	.....	.....	2,140	306	305,252	301,247
Asphalt	6,919	988	.....	.....	6,919	.....
Lubricants	7,140	1,020	1,250	179	186,646	177,971
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Fuel oil	80,712	11,530	52,190	7,456	2,240,972	2,530,663
Diesel and gas oil	22,155	3,165	15,248	2,175	382,847	619,868
Gasoline	190,704	27,243	119,914	17,131	2,616,432	2,363,112
Kerosene	.....	.....	12,781	1,826	250,794	257,363

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	61,729	8,818	.....	.....	247,520	203,139
Fuel oil	68,095	9,728	64,290	9,184	945,772	.....
Diesel and gas oil	.....	.....	.....	.....	233,051	178,662
Gasoline	125,156	17,879	.....	.....	1,138,961	1,115,657
Kerosene	.....	.....	.....	.....	122,200	199,453
Asphalt	65,795	9,399	74,226	10,604	280,447	284,401
Lubricants	.....	.....	3,001	429	11,184	3,009
Foreign exports—						
Crude oil	417,976	59,711	317,598	45,371	7,814,578	12,235,845
Fuel oil	440,067	62,867	143,146	20,449	4,189,613	3,941,837
Diesel and gas oil	231,496	33,071	206,179	29,454	3,266,720	2,779,598
Gasoline	42,652	6,093	340,405	48,629	4,385,561	4,299,882
Kerosene	.....	.....	38,785	5,541	926,838	800,821
Asphalt	6,919	988	.....	.....	6,919	.....
Lubricants	7,140	1,020	1,250	179	228,680	177,971
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Crude oil	269,072	38,439	209,511	29,930	4,782,222	4,580,068
Fuel oil	184,065	26,295	167,317	23,902	5,894,327	6,864,037
Diesel and gas oil	73,098	10,443	87,699	12,528	1,413,092	1,262,074
Gasoline	433,590	61,941	389,612	55,659	8,157,688	8,049,732
Kerosene	3,356	479	12,781	1,826	419,705	375,649

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216 ft. of oil and 12 ft. of fresh water. This well will be drilled ahead to about 7,640 ft. and brought in from that depth. In the eastern end of the Montebello field where deep zone work got under way a few years ago, the Texas Co. cored No. 18 Baldwin to 6,844 ft. but has indicated its intention of coring ahead following failure of the well to flow from that point. This well is in the extreme eastern end of the field.

Kern County

Superior Oil Co. extended the Rio Bravo field of Kern County 1,500 ft. north by completing No. 1 Moodie in Section 26-28-25, flowing 3,000 bbl. of 37.2-gravity oil and 1,200,000 cu. ft. of gas per day from the Rio Bravo zone at 11,529-50 ft. The well is the lowest structurally in the field but should show good production especially as the lower Rio Bravo zone has not been tested. Union Oil Co. No. 8-34 Kern County Land hit the top of the oil sand at 11,284 ft. or 245 ft. higher than Superior No. 1 Moodie, an offset.

Universal Consolidated Oil Co. completed No. 1 Derby in the Arvin field of Kern County, the largest flowing well yet put on production in the area. No. 1 Derby, in Section 15-31-29, is the highest well structurally in the field. It came in flowing 946 bbl. of 30.2-gravity oil and 2,000,000 cu. ft. of gas per day from the lower part of the Chanac with bottom of the hole at 6,173 ft. The hole was finished with a 7-in. water string and a perforated liner with perforations at 5,944-6,090 ft. and at 6,133-73 ft. It was brought in flowing through a 32/64-in. bean and showed a tubing pressure of 530 lb. and a casing pressure of 850 lb. No. 1 Derby is 660 ft. south of No. 1 Berry of Union Oil Co. which was abandoned as dry at 6,812 ft. last year. A fault passes about midway between No. 1 Derby and No. 1 Berry. The fault heads toward the north as the bit in Union's well went through the fault and in doing so upset calculations.

San Joaquin Basin

Shell Oil Co. in the Canal field of Kern County, in the San Joaquin Valley completed No. 36-14-A Kern County Land in Section 14-30-25, flowing 2,115 bbl. of 36.2-gravity oil and 1,350,000 cu. ft. of gas per day through two 1-in. beans from the Stevens zone with bottom of the hole at 8,340 ft. Top of the oil sand was logged at 8,120 ft. and a 7-in. water string was landed at 8,100 ft.

In the Greeley field of Kern County, Standard Oil Co. completed another well in the Rio Bravo zone when No. 2 Fleishauer was brought in flowing 700 bbl. of 34.5-gravity oil and 1,790,000 cu. ft. of gas per day from a depth of 11,600 ft. This new deep well was carried down to 11,900 ft. and then plugged back to the completed depth. Production was still cutting rather high at last reports indicating that the plug put in the bottom of the hole may have proved defective. On a short test the well flowed at the rate of 2,163 bbl. per day, indicating that good commercial production may be expected after the water problem has been remedied. No. 11-18 Kern County Land of Standard also in the Greeley field has hit the pay in the Greeley zone at 7,735 ft. and a string of 9⅝-in. casing will be run preparatory to an early production test.

In the North Belridge field of Kern County, Belridge Oil Co. completed No. 16-28 in Section 28-27-20 flowing 420 bbl. of 32.7-gravity oil and 2,000,000 cu. ft. of gas per day through two 96/64-in. beans from the Wagonwheel zone with bottom of the hole at 8,585 ft. In the Kern River field, D.B.K. Oil Co. completed No. 4 Kern pumping 5 bbl. of 14.1-gravity oil cutting 2 per cent from 382 ft. after the hole had been carried down to 405 ft. and then plugged back because of bottom water. The hole was finished with 322 ft. of 8⅝-in. and 87 ft. of 7-in. perforated liner. In the Shafter district of Kern County, Union Oil Co. No. 1-36 Kern County Land, a wildcat in Section 36-27-24, has taken on a very doubtful outlook at 12,985 ft. as it has failed to show anything but mud and salt water after several days swabbing. The well made one short blow of gas but showed very little oil. The oil that has been recovered is very heavy. This is due to dissolved Grahamite, a bituminous mineral that is abundantly present in the Vedder sands of the San Joaquin basin. In the Strand area of Kern County, Tide Water Associated Oil Co. failed to secure an effective water shut-off in No. 35-E Kern County Land, a wildcat in Section 7-30-26 at 8,300 ft. This well is bottomed at 8,364 ft. and shows about 40 ft. of promising oil sand.

At Buttonwillow, California Exploration Co. has plugged back No. 1 Salisbury from 12,989 ft. to 12,814 ft. and has run in 1,350 ft. of 4½-in. removable liner including 150 ft. of perforated preparatory to making a production test of some showings logged at that point. In the Coles Levee field of Kern County, Ohio Oil Co. recompleted No. 2-F Kern County Land in Section 10-31-25 flowing 160 bbl. of 32.6-gravity oil, cutting 6 per cent, through a 30/64-in. bean from 9,650 ft. This well was carried down in search of a deeper productive zone but failing to find a new zone at 9,917 ft. the company plugged back to the Stevens zone. Tide Water Associated Oil Co. No. 61 Kern County Land in the Coles Levee field in Section 14-31-25 has reached a depth of 9,769 ft. and is believed to be within 100 ft. of where the top of the Stevens interval should be found.

Los Angeles Basin

Howard Oil Co. appears to have found an extension of the Rosecrans field of Los Angeles County a few days ago as this company's test south of production cored 40 ft. of rich oil sand at 7,592-7,642 ft. in the O'Dea zone. A 6⅝-in. water string has been set at 7,585 ft. This well is believed to be south of a fault, in which case it may open up considerable acreage for development. Based on its showings to date, it is the most important well drilling in Los Angeles Basin because it is south of Compton Boulevard and thus is rather far south of production. Operators have always believed that additional production could be found somewhere around the Rosecrans field and on this basis Western Gulf drilled a dry hole east of the field on a fault play. Standard Oil Co. has held leases on several hundred acres west and south of the field and Richfield Oil Corp. also holds some acreage south of the productive section. J. H. Marion finished his No. 2 Rosecrans flowing and swabbing 200 bbl. per day of 33.9-gravity oil from the O'Dea zone with bottom of the hole at 7,893 ft. but will install pumping equipment in an effort to stimulate production.

In the Huntington Beach field, Southwest Exploration Co. which is aggressively developing tideland acreage completed No. 18 State pumping 230 bbl. of relatively clean 25.3-gravity oil per day from a depth of 4,900 ft. The hole was finished with a 9⅝-in. water string landed at 3,989 ft. and 970 ft. of 6⅝-in. liner including 910 ft. of perforated and 4,426 ft. of 2½-in. tubing. In the Torrance field of Los Angeles Basin, Kildumac Oil Corp. recompleted No. 1 Mitchell pumping 55 bbl. of 25.4-gravity oil cutting 4 per cent from 5,148 ft. This well, a former upper zone producer, located at 233rd and Eshelman streets was finished with an 8½-in. water string landed at 3,608 ft. and 1,677 ft. of 4¾-in. liner including 400 ft. of perforated and 4,360 ft. of 2½-in. tubing.

Gulf Coast Fields

(Continued from Page 61)

and others. The well is located on the L. L. Krey lease, B. Herra Survey, and is being drilled on a farmout from the Shell Oil Co., Inc.

About 3 miles northeast of the Joes Lake field, Tyler County, location for a Wilcox sand test was made by Bob Milner and others for No. 1 Cartwright, Lot 16, E. O. LeGrande Survey.

In Brazoria County, Glenn McCarthy is moving in material to the Chocolate Bayou area, for No. 1 Houston Farms Development Co. in the J. F. Perry and E. M. Austin Survey No. 7. On the southwest flank of the Danbury dome, Smith & McDannald have started drilling on No. 1 Slocum, a 9,000-ft. test in the Henry Austin Survey.

On the Citrus Grove prospect, Matagorda County, Continental Oil Co. No. 1 Savage topped a shallow sand at 3,842 ft. and the well attempted to blow out. It was brought under control within 6 hours but the hole was found bridged.

A second producer for the north flank of the Thompson field, Ford Bend County, was indicated as H. M. Naylor prepared to test No. 2 Musselman. Sand and sandy shale showing oil was cored at 7,708-68 ft., and 5½-in. casing was cemented at 7,700 ft. The well is a west offset to the same operator's No. 1 Musselman which opened production from the Vicksburg sand several weeks ago.

Another extension was recorded for the West Ranch field, Jackson County, as Magnolia Petroleum Co. cemented casing in No. 11-A West, after a drill-stem test showed 2,880 ft. of oil and 60 ft. of water in 15 minutes. Bottom of the hole is 5,160 ft. Approximately 1¼ miles south of production T. C. Young and Whitman Drilling Co. have rigged up No. 1 R. J. Stephen, in the R. Musquiz Survey, while approximately the same distance north of the field, Lonnie Glasscock is drilling below 2,400 ft. in No. 1 J. H. Drummond.

Location for an interesting wildcat was made in East Galveston Bay, Galveston County, by Sun Oil Co. for No. 1 State in Section 179. The well is about 1 mile northeast of the company's No. 1 Cade, a dry hole on Bolivar Peninsula, and about 3 miles due north of the newly discovered Capien field which is located near the Gulf of Mexico.

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

Brazoria County

Hastings field: Stanolind Oil & Gas Co. No. 13-C Moore perforated casing 6,050-78 ft., 618 bbl., ¼-in. choke.

Chambers County

Anahuac field: Humble Oil & Refining Co. No. 29 Johnson, sand 7,129-43 ft., 694 bbl., ¼-in. choke.

Fort Bend County

Thompson field: Humble Oil & Refining Co. No. 7 Davis, sand 4,315-45 ft., 97 bbl., ⅛-in. choke.

Galveston County

Dickinson field: Humble Oil & Refining Co. No. 6 Townes, 8,070 ft., gas well. High Island field: Stanolind Oil & Gas Co. No. 5 Cade, 6,357 ft., abandoned. League City field: George Echols No. 4 Ross-Stewart, perforated casing 8,683-8,702 ft., 246 bbl., ⅛-in. choke.

Hardin County

Silsbee field: Republic Production Co. No. 1 Beldard, sand 6,825-33 ft., 206 bbl., ⅛-in. choke.

Harris County

Bammell field: H. M. Harrell and others No. 2 Ehrhardt, 6,255 ft., gas well. H. M. Harrell No. 1 Phipps, 6,188 ft., gas well. Hamill & Smith No. 1-B C. T. Zapp, 6,250 ft., gas well. Fairbanks field: Amerada-Stanolind Oil & Gas Co. No. 4 Foley, perforated casing 6,834-37 ft., 114 bbls., ⅛-in. choke. Amerada-Stanolind Oil & Gas Co. No. 9 White, perforated casing 6,841-43 ft., 101 bbl., ⅛-in. choke. H. B. Ownby Drilling Co. No. 7 White, sand 6,840-54 ft., 143 bbl., ⅛-in. choke. Union Producing Co. No. 5 Whitehead and others, perforated casing 6,840-50 ft., 150 bbl., ⅛-in. choke. Friendswood field: Humble Oil & Refining Co. No. 28-B Humble-West, sand 5,771-6,042 ft., 576 bbl., ¼-in. choke. Satsuma field: H. E. Williams and others No. 2 Behne, sand 6,836-57 ft., 392 bbl., ¼-in. choke.

Jefferson County

Lovells Lake field: Humble Oil & Refining Co. No. 4 Jefferson Land Co., sand 7,710-20 ft., 168 bbl., ⅛-in. choke.

Liberty County

Hardin field: Humble Oil & Refining Co. No. 3-B Patlow, 7,587 ft., 399 bbl., ¼-in. choke.

Matagorda County

Markham field: Hamill and others No. 3 Meyers, 3,887 ft., 15 bbl., pumping. Hamill and others No. 5 Meyers, 3,858 ft., 265 bbl., flowing.

Polk County

Segno field: Gulf Oil Corp. No. 5 Ragan, 8,067 ft., 600 bbl., ¼-in. choke.

Wharton County

Withers field: Smith & McDannald No. 1 Hennessy-Deacon, sand 5,547 ft., 55 bbl., ⅛-in. choke. Texas Co. No. 30-B Pierce Estate, 5,548 ft., 75 bbl., ⅛-in. choke.

Illinois Fields

(Continued from Page 59)

cey, NE NE NW Section 16-3s-3w, Benoist sand top at 1,288 ft., hole full of water at 1,324 ft., shut down for orders. This is a Cordes pool outpost.

Jefferson County: Armstrong and others No. 1 Scott, SE NW SE Section 23-3s-2e, plugged back to 2,835 ft., set 7-in. casing at 2,821 ft., pumped 24 bbl. of oil and 60 bbl. of water, testing.

White County: J. Liggett No. 1 Matilda Hon, NE NW SE Section 32-3s-14w, cored 3,015-30 ft. and recovered 5 ft. of bleeding limestone. Will run casing and rig up standard tools.

Edwards County: Morrison & Noah No. 1 Stafford, NW NW SW Section 13-2s-10e, drilling at 2,440 ft.

Four Pools Opened in West Central Area; A Busy Week

By D. H. STORMONT

FORT WORTH, Tex., May 29.—Development around the Texas Pacific Coal & Oil Co. No. 1 Brownfield, 2½ miles northeast of the Denver field, Yoakum County, centered the week's activity in the West Texas area.

The West Central Texas district was featured by a new 7-day period high in developments. Four new oil pools were opened in as many counties and important developments in four recently discovered oil pools of Jones County added to the busy week.

Another outpost for the extension area 2½ miles northeast of the Denver field was seen when Oil Development Co. of Texas, on a farmout from the Coline Oil Corp., staked No. 1-A Willard in the northwest quarter of Section 803 as an east offset to No. 1 Brownfield, an oil well. In the same area Aloco Oil Co. has obtained a farmout from W. F. Walker in the southwest quarter and from Salmount Oil Co. in the southeast quarter of Section 764, and has staked location for No. 1 Mary Jordan in the southwestern corner of the latter farmout. This places the test about a mile west and a little north of the Brownfield well.

In Gaines County Humble Oil & Refining Co. No. 1 W. T. Caswell, Section 10, Block 24-A, P.S.L. Survey, a wildcat in the southern part of the county, and 5 miles northwest of the Landreth Production Corp. No. 1 Kirk, discovery well in the county, was drilling below 4,350 ft. and checking considerably higher on important markers than other tests in the general area.

Southern Basin Area

A ½-mile north extension to the east side of the Foster pool of Ector County was reported at the Lee Drilling Co. No. 1 J. L. Johnson, Section 5, Block 42, T.&P. Survey. The well was drilling below 4,212 ft., in lime, with 400 ft. of oil in the hole. The oil was uncovered at 4,135 ft., with an increase reported in drilling to 4,212 ft.

A shallow wildcat 3½ miles north of the Masterson pool in northern Pecos County has been staked by R. G. (Tex) Patillo, on a farmout from Gulf Oil Corp., the west quarter of Section 90, Block 10, H.&G.N. Survey. Patillo has staked No. 1 Gilworth in the southwest corner of the tract.

Schleicher County

Lone Star Gasoline Co. of Dallas abandoned No. 2 Humble-Page, northwest outpost to that county's gas and distillate field. The test was quit at a depth of 5,798 ft. when salt water was encountered. The first salt water, with a slight showing of oil, was found at 5,773 ft., 68 ft. into the lime, which was topped at 3,319 ft. below sea level, and 257 ft. lower than Cooper No. 1 Bert Page, the discovery well, almost a mile to the southeast.

Loving County received a new wildcat when Fred Hyer made location for No. 1 L. B. Russell, in the extreme western part of Section 80, Block 1, W.&N.W. Survey, seeking to spread the limits of the Wheat pool. The well is contracted to 4,200 ft.

WEST CENTRAL TEXAS

New oil pools were opened during the week in four West Central Texas counties, Coleman, Young, Shackelford and Eastland. Jones County reached a new high in activity as the week closed with five wildcats either staked or spudded. Major developments were reported in the Griffin, Akard, Appling and Lewis pools in that county.

The greatest lease play in some time is on the trend running southwesterly from the Ivy, Avoca and Griffin pools, where operators are seeking to discover new Palo Pinto lime fields. Several lease deals have been reported and new drilling on this trend is expected in the near future.

Coleman County's new oil pool opener was the Anzac Oil Corp. No. 4-C Morris, 5 miles northwest of Echo, in the David Breeding Survey. The well flowed 225 bbl. of oil in 2½ hours or at the rate of about 2,200 bbl. per day. Pay is from sand identified as the Strawn, topped at 2,175 ft. and drilled to 2,190 ft. The well is on a block of 2,700 acres owned by the company.

Another deep Caddo lime oil pool for Young County appeared in the making at Carl S. Leidecker and others No. 1 J. M. Nail, SW cor. Section 1997, T.E.&L. Survey, 1 mile west of the town of Loving. This wildcat is on a block of approximately 3,750 acres. It topped the Caddo lime at 4,220 ft., and found saturation at 4,460-65 ft. The well was estimated at 75 bbl. of oil daily. Operators cemented 5½-in. casing for a test. It is 16 miles north of the town of Graham and 6 miles west of the Bryson pool, Jack County.

Opening of a new shallow oil pool in Shackelford County was assured when the well drilled by John T. Cross came in flowing over the spudder mast. It topped the sand at 560 ft. and drilled only 6 inches into the pay. Location is on the Dennis heirs' lands, southwest quarter of Section 15, L.A.L. Survey, 10 miles south of Albany. It is an old well deepened from the 360-ft. sand in which it had been a producer.

Eastland County received a new oil pool when Dobbs Oil Co. No. 1 Greer, 2½ miles south of Carbon in the J. E. Hardy Survey, pumped a daily potential of 60 bbl. It is producing from the Caddo lime at 2,620-65 ft., which had been shot with 100 qt. Total depth is 3,131 ft., plugged back for completion.

Jones County

Five new wildcats were reported in Jones County. Fain-McGaha Oil Corp. No. 1 J. H. Harris, SE cor. Block 79, De Witt County School Lands, and 5 miles west of the Hendrick-Akard pool, is a location. The Avoca area listed a new wildcat as Groover & Rose, contractors, prepared to move in for Noark and others No. 1 Dallas Southard, 2 miles northwest of the townsite and in the southeast quarter of Section 8, D.&D.A. Survey. A new wildcat was staked 4 miles southwest of Lueders, E. C. Lawson No. 1 M. M. McNair, Lot 3, Block 5, Lawson Survey. Betweeen the Sayles pool and the Akard pool Shaheen & Keeler are drilling below 550 ft. S. B. Roberts Co. has staked No. 1 Charles Herndon, 2 miles south of Anson, in the SW cor. Section 6, M.E.P.&P. Survey. It is in an area where one producer and three dry holes were drilled.

Extending the eastern edge of the Griffin pool, Jones County, one location, commission gage on the Lewis Production Co. No. 3 Muenzler gave it a rating of 528 bbl. per day, natural flow, through 1¼-in. choke, from pay drilled to 3,279 ft.

An extension for the Akard pool, 10 miles northwest of Abilene, was seen at the close of the week. Third well out of five starts for the southern Jones County Akard pool flowed naturally to clean itself, having drilled 1 ft. of oil sand before cementing casing. The well is Hedrick Oil Co. and Christie & Jennings No. 1 Dorotha Akard, ¼ mile southeast of production.

North Jones County's Appling area listed two failures, Grisham-Hunter Oil Corp. No. 1 Osment west offset to the discovery well, was abandoned at 2,667 ft. after missing the pay section. George Callihan No. 1 Prewitt, ¼ mile north of the discovery, is bottomed at 2,672 ft., with the hole full of water. The area was opened several months ago by Gregg Oil Co. No. 1 Appling, Section 32, Block 1, B.B.B.&C. Survey, which was completed for 412 bbl. of oil daily.

In Jones County's Lewis pool, where good producers have been completed recently, Petroleum Producers will drill Nos. 1 and 2 Bryant-Link in the northwest quarter of Section 35, Block 15, T.&P. Survey and Omohundro will drill Nos. 1 and 2 C. G. Gumm in the southwest quarter of the same section. The pool was given a one-location north extension when Ungren & Frazier and Peckham No. 4 Brock Estate, northwest quarter of Section 36, flowed by heads from the Bluff Creek sand from 1,870-03 ft. and ran tubing to complete.

Palo Pinto County

Extension of production in the pool opened early in the year by J. W. Lane and others in Palo Pinto County will be sought by the same operators in the R. S. Dalton lands, northwest part of Section 1789, T.E.L. Survey, and 1,000 ft. east of their first well. Production is from a sand at about 1,240 ft.

Bowles Pool

East of Abilene on the Taylor and Callahan County line, W. J. Murray No. 1 Ed Evans, Section 28, B.A.L. Survey, was heading at an estimated rate of 100 bbl. daily into tanks. Casing had been cemented at 1,731 ft. with oil sand drilled from that depth to 1,752 ft., total depth. It offsets S. B. Roberts No. 1 Bowles estate, completed last January for 120 bbls. daily, pumping.

Locations

Haskell County and Stephens County registered new wildcat locations over the week past. A 4,500-ft. Ellenburger test has been staked in West Stephens County by Whittmer Oil & Gas Properties and others as No. 1 B. D. Loving, southeast corner of Section 66, B.A.L. Survey. Haskell County's test was E. W. Marland No. 1 Cobb, Section 96, Block 1, H.&T.C. Survey.

WEST TEXAS COMPLETIONS

(24-hour gage)

Crane County

Great Western No. 2-A University, 3,130-3,300 ft., 726 bbl. Gulf Oil Corp. No. 17 Henderson, 3,528-31 ft., 5,628 bbl. Humble Oil & Refining Co. No. 27 Tubbs, 4,255-4,420 ft., 1,035 bbl.

Ector County

Continental Oil Co. No. 1-C-21 Kloh, 4,225-80 ft., 149 bbl. M. J. Delaney No. 5 Smith, 4,190-4,382 ft., 1,976 bbl. Gulf Oil Corp. No. 17-B Connell, 3,435-3,680 ft., 220 bbl. Gulf Oil Corp. No. 187 Goldsmith, 4,181-4,231 ft., 122 bbl. Gulf Oil Corp. No. 188 Goldsmith, 4,159-4,211 ft., 1,057 bbl. Magnolia Petroleum Co. No. 1 T.X.L., dry and abandoned at 4,557 ft. Ohio Oil Co. No. 4 Cummins, 4,154-4,207 ft., 894 bbl. S. W. Richardson No. 1 T.X.L., dry and abandoned at 1,643 ft. Sinclair Prairie Oil Co. No. 4-A Johnson, 4,097-4,223 ft., 478 bbl. Stanolind Oil & Gas Co. No. 1 Griffin, 4,225-4,320 ft., 471 bbl. Stanolind Oil & Gas Co. No. 13 Witcher, 4,020-4,195 ft., 987 bbl.

Pecos County

H. G. Eastham No. 3 Standard-University, 1,607-1,710 ft., 245 bbl. Humble Oil & Refining Co. No. 1-J University, 1,680-98 ft., 98 bbl. Letwin-Lippet-Kallison No. 2 University, 1,630-50 ft., 524 bbl. W. H. Street No. 9 Shearer, 1,437-73 ft., 650 bbl. Sun Oil & Atlantic No. 10-A Payton, 1,978-2,085 ft., 132 bbl.

Ward County

Gulf Oil Corp. No. 123 Hutchins, 2,574-2,780 ft., 358 bbl. Magnolia Petroleum Co. No. 4-45 Sealey, 2,790-2,834 ft., 195 bbl. Sahara Oil Co. No. 2 Blair, 2,130-60 ft., 35 bbl. Sinclair Prairie Oil Co. No. 15 Archenhold,

(Continued on Page 74)

Southwest Texas District

By F. L. SINGLETON

Four Pools Opened in Webb, Starr and Nueces Counties

CORPUS CHRISTI, Tex., May 29.—The Southwest Texas district marked up another important week of developments as four new pools were opened and several wildcats were showing for pool openers. The new pools are in Nueces, Starr and Webb counties, while the Rincon distillate field, Starr County, received its first crude oil production.

Seaboard Oil Co. No. 1-A John LaPrelle, 1 mile north of the Luby field, Nueces County, which has been looked upon as a pool opener for the past few weeks is shut in waiting for storage after it flowed an estimated 4 bbl. of oil per hour on a drill-stem test which lasted several hours. The hole was drilled to a total depth of 4,437 ft. and 5½-in. casing was cemented at 4,370 ft. The casing was perforated at 4,347-54 ft. and the well is standing shut in, with tubing and casing pressure 550 lb.

In the same county and located 2 miles north of the Clara Driscoll field, Texas Conservative Oil Co. No. 1 Minnie Bock is bottomed at a total depth of 4,051 ft. and 7-in. casing was cemented at 3,859 ft. to test sand at 3,805-30 ft. which showed favorably on an electrical log. Nine sidewall cores taken of the section showed an oily sand at 3,804 ft., sand with no show of oil at 3,831 ft., sand with an oil odor at 3,832 ft. and sand with no oil showing at 4,033-37 ft. Practically all acreage in the area was under lease prior to the drilling of the well which is in Section 55, Pauls Subdivision of the Driscoll ranch.

In the South Clara Driscoll field, a 4,000-ft. southwest extension was indicated as Ralph Ogden cemented casing in No. 1 Miller. The hole is bottomed at about 6,800 ft. and casing was cemented for a production test after an electrical log was made of the hole. Details of the showing were not released by the operator, although the first test is expected to be made at approximately 6,500 ft.

Seaboard Oil Co. No. 1 Person, a wildcat near the town of Mathis, San Patricio County, has attracted attention as two drill-stem tests showed favorable indications. Sand with an oil odor was cored at 5,606-16 ft. and on a 15-minute drill-stem test the well developed 42 lb. of working pressure and recovered 60 ft. of oil and mud of which 65 per cent was estimated as oil and the balance mud. Another core was taken at 5,616-26 ft. and a 15-minute drill-stem test showed 42 lb. working pressure and 360 ft. of oily mud and brackish water. Salt water sands were logged at 5,661-66 ft. and at 5,820-25 ft. Location is in the A.B.&M. Survey No. 6.

Bridwell Oil Co. opened the "Ben Bolt" field, Jim Wells County, as No. 1 Smith, 2 miles southwest of the town, was cleaning into the pits showing for a good producer. Twenty feet of oil sand was cored in the Frio-Vicksburg formation and the well was completed through perforated casing at 5,242½-46½ ft. While cleaning out through a small size choke, tubing pressure was 500 lb. and casing pressure 600 lb. It is the general opinion that this strike will be one of the most important fields to be found along the Frio-Vicksburg trend. Location is in the La Trinidad Survey.

Rincon's First Oil Well

One of the most important developments in the lower Rio Grande Valley district is believed to have been the completion of the first oil producer in the Rincon area, Starr County. Transwestern Oil Co. and Rowan & Hope No. 1 Cameron, 2 miles north of the discovery well, perforated casing at 4,160-70 ft. and was completed for an initial production of 144 bbl. per day, flowing through ½-in. choke under a tubing pressure of 375 lb. and casing pressure 575 lb. Gravity of the oil tested 41.4 degrees. The sand section logged at 5,154-74 ft. is believed to be the Frio-Vicksburg formation, and the completion was made after 7-in. casing was cemented on bottom at 4,216 ft. The well is in Section 228, in the eastern part of the county, on a geophysical structure which is said to cover several thousand acres.

In the same county and about 3,000 ft. north of the Ricaby field, Bishop & Moss opened the North Ricaby field with the completion of No. 1 Sanford B. Ricaby. Sand was cored at 1,294-1,305 ft. and the well was completed on the pump for an initial production of 120 bbl. per day. Location is in the west half of Porcion 83.

In Webb County, Gordon W. Johnson No. 1 Mabel Adami, Survey No. 345, is believed to have opened shallow production from the Mirando sand, as the well is being rigged up with pumping equipment after it bailed considerable oil. Sand was logged at 990-99 ft.

Two other wildcats in Webb County were being watched with much interest. Harvey & Henderson No. 1 Perez, J. Poitevent Survey No. 459, cored sand with an oil and gas odor at 2,523-34 ft. and sand showing oil at 2,534-35 ft. An attempted drill-stem test failed, and the hole was cored ahead to 2,542 ft., recovering sand with an oil show. A 20-minute drill-stem test at 2,520-35 ft. recovered 160 ft. of mud and no working pressure. Another test at 2,521-42 ft. tested 20 ft. of drilling mud with a slight show of oil.

Navarro Oil Co. No. 2 R. V. Benavides, Block 11, Section 1, Josefa Cuellar grant, is coring below 3,260 ft. after two drill-stem tests at 2,538-66 ft. and 2,961-67 ft. showed as much as 30 ft. of oil, 75 ft. of working pressure and some salt water.

In Hidalgo County, Rowan & Hope No. 1 Antonio Bazan was abandoned at 7,508 ft.

J. B. Blanchard and others No. 1 Parr, discovery well of a new field for the Pettus trend in Duval County, is still testing and is flowing at the rate of 22 bbl. of oil per day through a 3/32-in. choke, under a tubing pressure of 1,100 lb. and casing pressure 1,500 lb. Production is from sand at 4,710-15 ft. Location is in the T. C. Rogers Survey, about 8 miles west of San Diego.

Along the Balcones Fault Line, Marts & Beaven No. 1 R. E. Chiles, William McLaughlin Survey, Bastrop County, is waiting for orders after the well swabbed sulfur water with a slight show of oil. Casing was cemented for a production test after a showing of oil was logged in the Edwards lime at 3,217-20 ft. Joe Hughes and others No. 1 O. B. Lentz, Freeman Wilkinson Survey, is preparing to deepen after the hole was swabbed dry. A showing of oil was logged in the Dale lime at 2,348-68 ft. and the Austin chalk at 2,380-2,460 ft.

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

Aransas-San Patricio Counties

McCampbell field: Paul Benedum No. 1 Scevers, perforated casing 7,110-25 ft., 85 bbl., ½-in. choke. R. B. Bryant No. 1 Stockton, 7,167 ft., 65 bbl., ½-in. choke. R. B. Bryant No. 1 Unit No. 15, perforated casing 7,112-30 ft., 75 bbl., ½-in. choke. J. K. Culton and others No. 1 Barry, perforated casing 6,775-79 ft., 108 bbl. fluid, 10 per cent salt water, 5/32-in. choke. Graham Oil Co. No. 2 Moeller, perforated casing 7,118-23 ft., 88 bbl., ½-in. choke. Joseph S. Morris No. 1 Sweet and others, perforated casing 7,162-68 ft., 33 bbl. distillate, ½-in. choke.

Bexar County

Somerset field: F. M. Johnston No. 2 Carruthers, 1,400 ft., 10 bbl., pumping. Von Ormy field: Shadrock Oil Co. No. 12 Barragan, sand 635-66 ft., 6 bbl., pumping.

Duval County

Casa Blanca field: Magnolia Petroleum Co. No. 18 Duval County Ranch Co., 1,354 ft., abandoned. Cedro Hill field: Magnolia Petroleum Co. No. 7 Duval County Ranch Co., perforated casing 1,428-40 ft., gas well. Driscoll field: Continental Oil Co. No. 35-A Driscoll, 3,383 ft., abandoned. Fitzsimmons field: Blucher Production Co. No. 1 Mew, perforated casing 4,263-67 ft., 135 bbl., 9/64-in. choke. Navarro Oil Co. No. 1 Mew, perforated casing 4,261-66 ft., 100 bbl., ½-in. choke. Sun Oil Co. No. 14 Brueggemann, perforated casing 4,285-92 ft., 125 bbl., 7/64-in. choke. Hoffman field: Cuellar Brothers No. 4 fee, sand 2,534-57 ft., 140 bbl., ½-in. choke. Magnolia Petroleum Co. No. 34 Weil, perforated casing 2,695-2,705 ft., gas well. Piedra De Lumbre field: Humble Oil & Refining Co. No. 3-E Duval County Ranch Co., sand 2,106-16 ft., 31 bbl., 3 hours, pumping.

Caldwell County

Salt Flat field: L. H. Bridges No. 1 Smith, 2,661 ft., 100 bbl., pumping.

Guadalupe County

Darst Creek field: Cities Service Oil Co. No. 7 Dowdy, sand 2,612-20 ft., 60 bbl., pumping. Wiegand Brothers No. 2-A Wille, 2,631 ft., 55 bbl., pumping.

Jim Hogg County

Kelsey field: Humble Oil & Refining Co. No. 13 Bass, sand 4,726-39 ft., 72 bbl., 16 hours, 9/64-in. choke. Humble Oil & Refining Co. No. 9 McGill, 5,736 ft., 146 bbl., 9/64-in. choke.

Jim Wells County

Magnolia City field: Rich Irwin and others No. 1 Garcia, 5,464 ft., abandoned. South Alice field: Atlantic Refining Co. No. 1-B Bankers Mortgage, perforated casing 5,315-27 ft., 49 bbl., 12 hours, ¼-in. choke.

McMullen County

Ezzell field: E. M. Jones No. 91 Ezzell, perforated casing 1,497-1,501 ft., 60 bbl., pumping.

Nueces County

Clara Driscoll field: O. W. Killam No. 3 Webb, 6,000 ft., abandoned O. W. Killam No. 1 Holmes, perforated casing 5,065-81 ft., 74 bbl., 3/32-in. choke. Luby field: Stanolind Oil & Gas Co. No. 22 Spessard, 5,062 ft., 114 bbl., ½-in. choke.

Refugio County

Refugio field: Houston Oil Co. No. 21 Rooke, perforated casing 6,222-32 ft., 188 bbl., ½-in. choke. Tomoconnor field. Quintana Petroleum Corp. No. 6 Heard, perforated casing 5,190-5,210 ft., 1,366 bbl., ⅝-in. choke.

San Patricio County

East White Point field: Houston Oil Co. No. 5-A Baldwin, perforated casing 2,495-2,505 ft., gas well. Plymouth Oil Co. No. 3 Sparks, perforated casing 5,650-61 ft., 120 bbl., 7/64-in. choke. Sinclair Prairie Oil Co. No. 5 Womack, 5,665 ft., 141 bbl., ½-in. choke. R. A. Welch No. 3 Welch, perforated casing 5,638-77 ft., 120 bbl., ½-in. choke.

Victoria County

Keeran field: Gulf Oil Corp. No. 15 Keeran, 6,951 ft., 63 bbl. oil, 36 bbl. salt water, ½-in. choke. McFaddin field: Houston Oil No. 2 Fagan, perforated casing 5,295-5,300 ft., 26 bbl., 7/64-in. choke. North McFaddin field: Transwestern Oil Co. No. 5-A McFaddin, perforated casing 5,160-75 ft., gas well.

Zapata County

Mirando Valley field: Buffalo Oil Co. No. 8-A Hinnant, 1,903 ft., pumping. Buffalo Oil Co. No. 6-B Hinnant, sand 1,815-25 ft., 35 bbl., pumping. Interstate Minerals, Inc., No. 4 Lopez, sand 1,800-10 ft., 70 bbl., ¼-in. choke. Interstate Minerals, Inc., No. 5 Lopez, sand 1,786-98 ft., 20 bbl., ¼-in. choke. Interstate Minerals, Inc., No. 6 Lopez, sand 1,784-96 ft., 40 bbl., ¼-in. choke.

Extending the Advantages of

National Stripper Tubing Heads

to the Shallower Fields

The results shown by National Stripper Type Tubing Heads for high pressure fields has resulted in a demand for the same features in a head for flowing wells in the shallower areas. The National Type HH-1D Tubing Head, with the same superior ability to strip tubing, is now available for this service.

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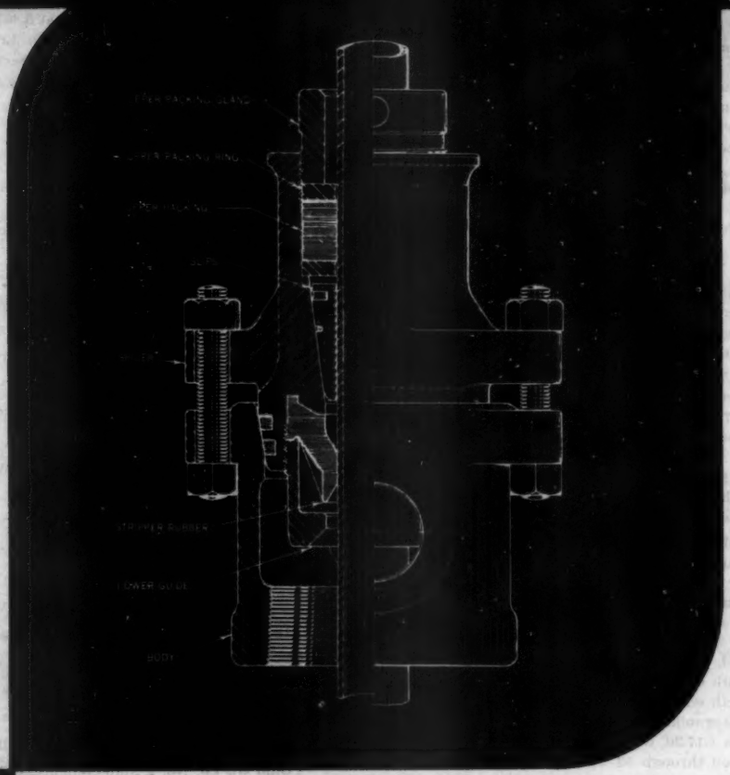
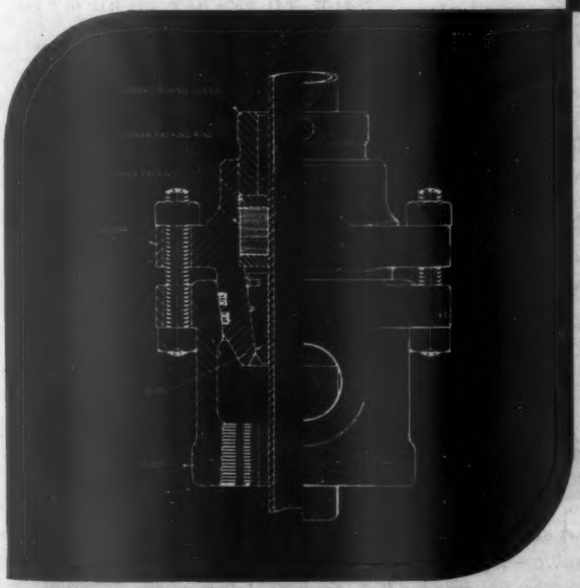
The Type HH-1 Head is identical with the Type HH-1D except there is no provision for a stripper rubber. By substituting its hanger for the Type HH-1D, when wells cease to flow, the permanent well investment can be materially lowered.



National Type HH-1D Stripper Tubing Head for flowing wells in shallow fields—500 lbs. working pressure.



National Type HH-1 Tubing Head for use on non-flowing wells in shallow fields—500 lbs. working pressure.

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Rocky Mountain Area

By
T. R. INGRAM

Largest Lovington Oil Well Completed, Two More in Pay

DENVER, Colo., May 29.—A Denver syndicate headed by Joseph Ahern has started an important test in the West Axial basin district of Moffat County in northwestern Colorado. This structure has long been considered a suitable area for oil and gas production and government geologists have commented quite favorably on its possibilities in at least two bulletins.

The old Kevin-Sunburst field in northern Montana near the Canadian line had three completions the past week and one of the new wells has further demonstrated the value of acid treatment of a limestone formation. This well is A. E. Crumley No. 16 Fryberger in the west extension. Its initial natural production of 2 bbl. of oil a day was increased to 7 bbl. of oil an hour as the result of acid treatment.

Minnelusa Oil Corp. completed a well good for 30 bbl. of oil an hour on the west side of the Lance Creek field of East Central Wyoming.

NEW MEXICO

Two producers in the new Lovington field in Lea County, New Mexico, were near completion, and the largest oil well drilled to date in the pool was completed the past week.

United Producers, Inc., No. 1 Caylor, 330 ft. from the north line and 3,390 ft. from the east line of Section 6-17-37, produced 309 bbls. of oil naturally in 24 hours, flowing through ¾-in. choke on 2-in. tubing set at 4,922 ft. It was bottomed at 4,942 ft. in lime. It was acidized with 2,000 gal. and flowed 240 bbl. of oil daily through ⅛-in. choke. It is south offset to Repollo Oil Co.'s east-extension producer at Lovington.

Magnolia Petroleum Co. No. 1-Q State, C SW NE Section 36-16-36, stopped at 5,110 ft. in lime, set 2½-in. tubing at 5,108 ft. and acidized with 1,500 and 5,000 gal. Tubing was pulled and rerun to 4,924 ft., with packer set at 4,582 ft. After swabbing down and being shut in for 18 hours, it flowed 53½ bbl. of oil in 8 hours and died. Pumping equipment was being installed. It is south offset to Skelly Oil Co.'s discovery oil well at the north end of the pool.

Magnolia Petroleum Co. No. 1-R State, C NW SE Section 1-17-36, was completed for natural flow of 301 bbl. of oil through 53/64-in. choke on 2½-in. tubing set at 4,958 ft., making it the largest producer at Lovington. Pay was topped at 4,685 ft., total depth 4,960 ft. in lime. Seven-inch casing was set at 4,530 ft. Gravity of the oil was 34°.

Other completions in Lea County were:

Standard Oil Co. of Texas No. 3 State 5, C SW NW Section 27-17-35, Vacuum field, topped pay at 4,435 ft., total depth 4,620 ft. in lime, was acidized with 1,500 gal. and flowed 175 bbl. of oil in 7 hours through tubing set at 4,616 ft. Seven-inch casing was set at 4,204 ft.

Texas Co. No. 3-N State, C SW NW Section 30-17-35, had pay at 4,400 ft., was bottomed at 4,750 ft. in lime, and flowed 89 bbl. of oil in 16 hours by gas lift. The 5½-in. casing was set at 4,188 ft.; 2-in. tubing at 4,681 ft.

Ohio Oil Co. No. 2 State-Warn, Account 2, C SE NW Section 33-17-35, had natural flow of 106 bbl. of oil in 2 hours through choke on 2½-in. tubing set at 4,566 ft. Pay was found at 4,300 ft., total depth 4,600 ft. in lime, with 7-in. casing set at 4,092 ft.

Drilling & Exploration Co. No. 1-D Shell-State, SW SW SE Section 36-21-36, Eunice district, topped pay at 3,725 ft. and was bottomed at 3,809 ft. Two-inch tubing was set at 3,803 ft., with 5½-in. casing at 3,711 ft. It flowed 252 bbl. of oil in 22 hours through choke, with 717,000 cu. ft. of gas.

Fullerton Oil Co. No. 1-A Walker, C SW NW Section 18-18-32, wildcat, was plugged and abandoned at 4,383 ft., total depth, in sand.

North Shore Corp. No. 3 Woolworth, SW SW NW Section 33-24-37, Mattix pool, found pay at 3,531 ft., total depth 3,576 ft. in lime, and plugged back to 3,550 ft. It flowed 60 bbls. of oil daily. Seven-inch casing was set at 3,419 ft., 2-in. tubing at 3,515 ft.

Anderson-Prichard Oil Corp. No. 7 Wells, C NW SW Section 4-25-37, Langlie area, flowed 27 bbls. of oil an hour through choke in the last 9 hours of a 17-hour test. Pay sand was found at 3,480-96 and 3,528-37 ft., with the hole bottomed at 3,537 ft. in lime. Tubing was set at 3,513 ft., with 7-inch casing at 3,307 ft.

Two failures were reported in Eddy County. C. F. Ingham No. 1 Page, NE NE SW Section 15-21-28, wildcat, was dry and abandoned at 2,978 ft.

George E. Bobb No. 1 Vandagrift, C SW NE Section 6-19-31, wildcat, was dry and abandoned at 850 ft., total depth, in lime.

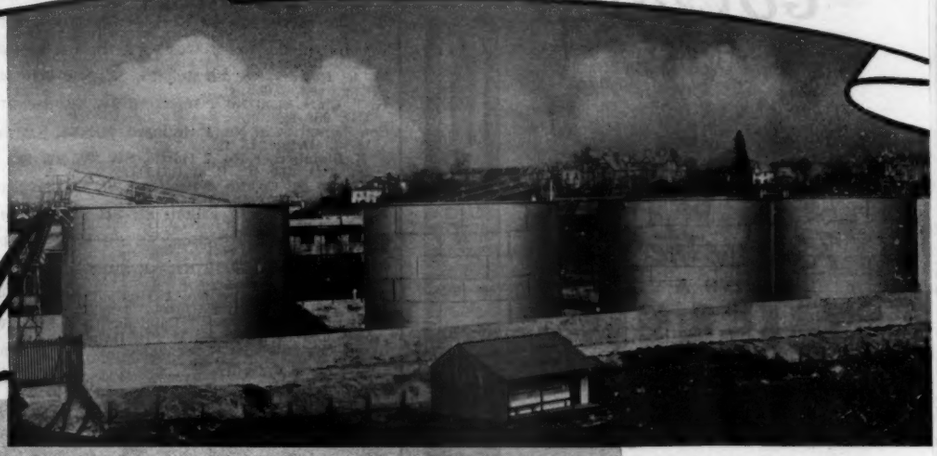
Lea County

Carper-Taylor No. 1 Taylor (wildcat), SW SW SW Sec. 30-16-32. T.D. 4,097 ft.; P.B. 4,050 ft.; pulling tbg.
Magnolia Pet. Co. No. 1-Q State, C SW NE Sec. 36-16-36. T.D. 5,110 ft.; F. 53 B.O. in 18 hours.
Magnolia Pet. Co. No. 1-S State, C NE SW Sec. 34-16-34. Drlg. 4,470 ft.
Repollo Oil Co. No. 2 State, Lse. 182, C S½ NE SW Sec. 31-16-37. T.D. 4,550 ft.; W.O.C.
Skelly Oil Co. No. 1-O State, C E½ SW SW Sec. 31-16-37. T.D. 4,565 ft.; W.O.C.
Carper Drlg. No. 1 Simon, C NE NE Sec. 29-17-32. T.D. 3,759 ft.; F. 40 B.O. and died.
Drlg. & Exploration No. 1-C State, C W½ SE SE Sec. 24-17-34. Drlg. 2,514 ft.
Phillips Pet. Co. No. 1 Mable, C NW NW Sec. 35-17-34. Loc.
Drlg. & Exploration No. 2-M State, SW NW SE Sec. 29-17-35. Drlg. 4,017 ft.
Drlg. & Exploration No. 1-W State, NW NW SE Sec. 26-17-35. T.D. 4,585 ft.; F. 51 B.O. in 1 hour.
Phillips Pet. Co. No. 30 Santa Fe, C SW NW Sec. 26-17-35. Loc.
Shell Oil Co. No. 3-N State, C SW NE Sec. 28-17-35. R.U.R.
Humble O. & R. Co. No. 5-K State, C SE NE Sec. 32-17-35. W.O.C. 4,660 ft.
Humble O. & R. Co. No. 6-K State, C SE SE Sec. 32-17-35. Drk.
Paul Love No. 3 Pearsall, C NW NW Sec. 33-17-32. Spdg.
Magnolia Pet. Co. No. 1 Selby, C NW NE Sec. 7-17-37. Drlg. 4,802 ft.
Magnolia Pet. Co. No. 31 State-Bridges, C NE NW Sec. 23-17-34. T.D. 4,650 ft.
Magnolia Pet. Co. No. 32 State-Bridges, C NE NW Sec. 25-17-34. Drlg. 4,175 ft.
Magnolia Pet. Co. No. 33 State-Bridges, C NW SE Sec. 26-17-34. Drlg. 4,173 ft.
Maljamar O. & G. Co. No. 2-B Baish, C NE NE Sec. 27-17-32. W.O.C. 3,996 ft.
Maljamar O. & G. Co. No. 2 Mitchell, SW SE SW Sec. 5-17-32. Drlg. 3,727 ft.
Ohio Oil Co. No. 2 State-Shugart, C NW SE Sec. 34-17-34. W.O.C. 510 ft.
Phillips Pet. Co. No. 5 Hale, C NW SE Sec. 35-17-34. S.D.; reprs. 4,616 ft.
Phillips Pet. Co. No. 29 Santa Fe, C SW NW Sec. 33-17-35. T.D. 4,634 ft.; rng. tbg.
Shell Oil Co. No. 1-T State, C NE SE Sec. 33-17-35. W.O.C. 4,270 ft.
Shell Oil Co. No. 2-T State, C NW SE Sec. 33-17-35. Set 8⅝-in. csg. 1,571 ft.; T.D. 1,576 ft.; W.O.C.
Shell Oil Co. No. 2-N State, C SE NE Sec. 28-17-35. Drlg. 4,422 ft.
Skelly Oil Co. No. 1-P State, C NW NW Sec. 33-17-35. Loc.
United Producers No. 1 Caylor, NE NE NW Sec. 6-17-37. T.D. 4,942 ft.; F. 309 B.O. in 24 hours.
Texas Co. No. 1-Z State, C NW NW Sec. 2-18-34. Drlg. 4,504 ft.
P. B. English No. 1 Miller, C NE SE Sec. 18-19-32 (wildcat). T.D. 3,077 ft.; S.D.
Continental Oil Co. No. 6 Britt B-15, C W½ SE NW Sec. 15-20-37. Drlg. 3,400 ft.
Continental Oil Co. No. 5 Sanderson B-14, NE NW SW Sec. 14-20-36. T.D. 3,828 ft.; F. 5 B.O.P.H.
Phillips Pet. Co. No. 4 Hobbs, C SE SW Sec. 18-20-37. W.O.C. 278 ft.
Stanolind O. & G. Co. No. 4-B Gilluby, NW NW NW Sec. 22-20-37. Drlg. 3,757 ft.
Texas Co. No. 18 Lieu Lands, C NE NW Sec. 19-20-37. T.D. 3,865 ft.; est. 3,500,000 cu. ft. gas.
Aloco Oil Co. No. 2-B Carson, C NW SE Sec. 28-21-37. T.D. 3,754 ft.; swbg.
Dangiade & Clower No. 2 Owen, C W½ NW SW Sec. 34-21-37. Fsg. 1,865 ft.
Gulf Oil Corp. No. 1-C Carson, C NE NE Sec. 33-21-37. T.D. 3,760 ft.; shot and tstg.
Humble O. & R. Co. No. 1 Hardison, C SW NE Sec. 34-21-37. Drlg. 3,036 ft.
Magnolia Pet. Co. No. 5 Carson, C SW NE Sec. 33-21-37. Drlg. plug 3,635 ft.
Stanolind O. & G. Co. No. 5-C Hill, C NW NE Sec. 5-21-37. Reaming 865 ft.
Wilson Oil Co. No. 1 Shell-State, C NE SW Sec. 7-21-35. Loc.
J. C. Clower No. 1 Christmas, SE SE SW Sec. 28-22-37. T.D. 3,690 ft.; 1,700 ft. O.I.H.
Continental Oil Co. No. 1-A Elliott, C SE SE Sec. 21-22-37. T.D. 3,648 ft.; P. 67 B.O. in 18 hours.
Gulf Oil Corp. No. 5-E Mattern, SW SW NW Sec. 12-22-36. W.O.C. 3,695 ft.
Gulf Oil Corp. No 6-E Mattern, SW SE NW Sec. 12-22-36. Loc.
Lem Peters No. 2 Call, C W½ NW SW Sec. 26-22-37. Drlg. 3,500 ft.
Lem Peters No. 3 T. O. May, SW SW NE Sec. 34-22-37. Spd.
Repollo Oil Co. No. 2 State, Lse. 157-D, NW NE SW Sec. 12-22-36. Drlg. 3,433 ft.; 1,200 ft. O.I.H.
Shell Oil Co. No. 1 T. O. May, NW NW NW Sec. 35-22-37. T.D. 3,622 ft.; C.O.
Skelly Oil Co. No. 2-A Baker, SW SW NW Sec. 26-22-37. T.D. 3,669 ft.
Skelly Oil Co. No. 8 Baker, SW NE NE Sec. 27-22-37. Drlg. 3,440 ft.
Texas Co. No. 2-B Fally, C SE SW Sec. 8-22-37. T.D. 3,720 ft.; P.B. 3,694 ft.; C.O.
Texas Pacific C. & O. No. 15-A State, C N½ SE NW Sec. 11-22-36. T.D. 3,856 ft.; P.B. 3,851 ft.; tstg.
Texas Pacific C. & O. No. 16-A State, NE NE SE Sec. 11-22-36. Drlg. 2,980.
Continental Oil Co. No. 1 Lynn A-28, C SW NE Sec. 28-23-36. T.D. 3,600 ft.; W.O.C.
Great Western Prod. No. 3-B Leonard, SW NE NW Sec. 32-23-37. Drlg. 3,058 ft.
Skelly Oil Co. No. 4 Simms, SW NE SE Sec. 3-23-37. T.D. 3,552 ft.; plg. csg.
Addison Oil No. 4 Knight, C SE NW Sec. 27-24-37. Spd.
Anderson & Prichard No. 1-A State, C SW NW Sec. 32-24-37. T.D. 3,549 ft.; F. 14 B.O.P.H.
Anderson-Prichard Oil Corp. No. 1-B State-32, C SE NW Sec. 32-24-37. C.&P.
Amerada Oil Co. No. 2 Johnson, C SW SW Sec. 27-24-37. W.O.C. 3,295 ft.
Continental Oil Co. No. 1 Jack B-29, NE SE SE Sec. 29-24-37. Drlg. 3,000 ft.
Continental Oil Co. No. 3 Jack B-27, C NW SE Sec. 27-24-37. T.D. 3,525 ft.; F. 11 B.O. in 30 minutes.
Humble O. & R. Co. No. 1-L State, C NE SE Sec. 32-24-37. T.D. 3,560 ft.; P.B. 3,551 ft.; S.I.
Humble O. & R. Co. No. 2-L State, C SE NE Sec. 32-24-37. Drlg. 3,508 ft.
Kan-Mex Oil Co. No. 4 Vaughn, C SE NE Sec. 3-24-36. T.D. 3,553 ft.; S. 12 B.O.P.H.
Montecito Corp. No. 2 Woolworth, NE SW SW Sec. 33-24-37. Drlg. 400 ft.
North Shore Oil Corp. No. 4 Woolworth, SE NW NW Sec. 33-24-37. T.D. 3,551 ft.; pay 3,470 ft.; F. 100 B.O.P.D.
Phillips and Pure No. 7 Woolworth, C SW NE Sec. 33 24-37. T.D. 3,550 ft.; F. 35 B.O. in 1 hr. and died.
Phillips and Pure No. 8 Woolworth, C NW NE Sec. 33-24-37. Loc.
Repollo Oil Co. No. 2-C State, Lse. 157, NE SE SE Sec. 32-24-37. T.D. 3,621 ft.; P.B. 3,593 ft.; C.O.
Repollo Oil Co. No. 4-B Whitten, NE NE SE Sec. 4-24-36. Drlg. 3,723 ft.
Schermerhorn Oil Co. No. 5 Woolworth, NW SW NE Sec. 28-24-37. T.D. 3,549 ft.; C.O.
Schermerhorn Oil Co. No. 6 Woolworth, C SW SE Sec. 28-24-37. T.D. 3,550 ft.; F. 236 B.O. in 3 hrs.
Schermerhorn Oil Co. No. 7 Woolworth, C SE SE Sec. 28-24-37. Drlg. 782 ft.
Weier Drlg. Co. No. 4 Woolworth, SE NW SW Sec. 28-24-37. Drlg. 840 ft.
Anderson & Prichard No. 6 Wells, C SW NW Sec. 5-25-37. T.D. 3,430 ft.; 4,000,000 cu. ft. of gas.
Anderson & Prichard Oil Corp. No. 8 Wells, C N½ NE NW Sec. 4-25-37. C.&P.
Anderson & Prichard Oil Corp. No. 9 Wells, C SW NE Sec. 6-25-37. Loc.
Cities Service No. 2 Dabbs, SW SW NW Sec. 23-25-37. T.D. 3,360 ft.; S.&F. 12 B.O.P.H.
Ralph Olson No. 1 Langlie, SE NW NW Sec. 10-25-37. Drlg. 1,650 ft.
Parker Drlg. No. 1-B State, C W½ NE NW Sec. 2-25-37. T.D. 110 ft.
Richmond Drlg. No. 3-A State, C SE SW Sec. 2-25-37. Drlg. 3,075 ft.
Weiner et al No. 4 Smith, NW SE SE Sec. 4-25-37. Drlg. 2,814 ft.
Stanolind O. & G. No. 1-B Gregory, C SW NW Sec. 15-26-37. Drlg. 1,465 ft.

Eddy County

Allen, Fair & Pope No. 1-A State, SE NE SE Sec. 36-17-29. T.D. 2,775 ft.; pay 2,740-60 ft.; swb. 45 B.O. while C.O.
Allen, Fair & Pope No. 2-A State, SE SW SW Sec. 36-17-29. Drlg. 2,275 ft.
B. L. Arnold No. 1 Arnold, NW NW NW Sec. 34-17-30. T.D. 3,338 ft.; 1,200 ft. O.I.H.
Aston & Fair, Inc., No. 1 Hudson, C NE NE Sec. 19-17-31. T.D. 3,533 ft.; S. 50 B.O. in 22 hrs.
Flint Prod. Co. No. 1-L Dexter, SE NW SE Sec. 15-17-30. T.D. 4,339 ft.; 2,000 ft. W.I.H.; S.D.O.
Friendship Oil Co. No. 1 State, SE SE SW Sec. 30-17-29. Drlg. 280 ft.
Grayberg Oil Co. No. 12 Burch, NW NW SE Sec. 19-17-30. T.D. 2,842 ft.; 1,200 ft. O.I.H.
J. E. Hughes No. 2 Brooks, NE NW NW Sec. 19-17-28. Drlg. 575 ft.
C. L. Jones No. 1 Harbold, NE NE NE Sec. 26-17-27. S.D. 196 ft.
F. G. Keyes No. 3 State, NE SW NE Sec. 9-17-28. Drlg.

WIGGINS PONTOON ROOFS *in England*



GLOUCESTER

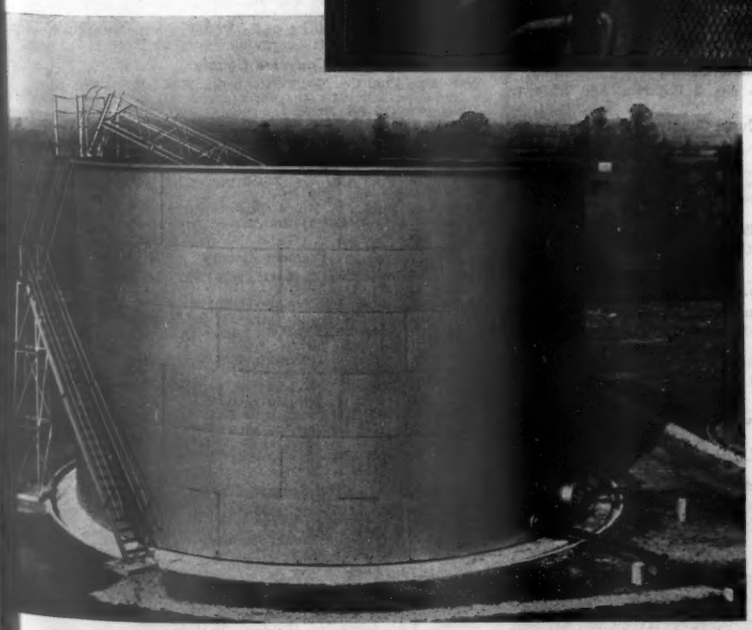
The illustration at the bottom of the page shows a 49 ft. 2½ in. diameter Wiggins Pontoon Roof tank used for the storage of motor spirit at a marketing depot in Gloucester, England. The Whessoe Foundry & Engineering Co., Ltd., also installed this unit.

WORCESTER

The panoramic view illustrated above shows an interesting group of five identical steel storage tanks, all of which are equipped with Wiggins Pontoon Roofs. They are located at Worcester, England.

NOTTINGHAM

The view at the left shows a close up view of a Wiggins Pontoon Roof on a 65 ft. 7 in. diameter tank located at a motor spirit marketing station in Nottingham, England. It was built by the Whessoe Foundry & Engineering Co., Ltd., under a license agreement covering installations in Great Britain.



THE advantages of Wiggins Pontoon Roofs are *universally* recognized—they are equally important in England as they are in the United States. It is for this reason that the policy has been followed of making Wiggins Roofs, and other Horton products, available to any location on earth. The success with which this policy has been met is attested by numerous modern installations such as the ones shown on this page. Thus, with few exceptions, it is just as practical for an oil company to specify Wiggins Roofs or other Horton products for any overseas properties it may operate, as for domestic use. Address our nearest office for complete information.

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TULSA.....1606 Hunt Building
BIRMINGHAM.....1536 N. Fiftieth Street
CHICAGO.....2128 Old Colony Building
DETROIT.....1514 Lafayette Building
CLEVELAND.....2204 Rockefeller Building
NEW YORK.....3347-165 Broadway Building
PHILADELPHIA.....1615-1700 Walnut St. Building
BOSTON.....1517 Consolidated Gas Building
SAN FRANCISCO.....1054 Rialto Building
LOS ANGELES.....1423 Wm. Fox Building

LICENSEES: Horton Steel Works, Limited, Ft. Erie, Ont., Canada; The Motherwell Bridge & Engineering Co., Ltd., Motherwell, Scotland; The Whessoe Foundry

Cleans out the sand and sediment—*lets the oil come in.* MILLER Sand Pump is the Clean-Out tool—*in World Wide use.*

The MILLER is made in diameters of 2½, 3, 3½, 4, 4½, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 6/32-inch wall thickness in REGULAR Type. ¼-inch wall thickness in HEAVY Type Sand Pumps.

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To Meet Every Condition

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- **SAND BOTTOM** — Used when tools are run and when well is shot to quickly remove loose material.
- **STAR BOTTOM** — Used for cutting the sand loose.
- **CHISEL BOTTOM (In Pump)** — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Pages 1564-65 COMPOSITE CATALOG

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THE OIL AND GAS JOURNAL
Box 1260C Tulsa, Okla.

Nash et al No. 9-A Jackson, C N½ NW NE Sec. 24-17-30. Rng. csg. 2,935 ft.
R. L. Newberry No. 2 Saunders, NE SE SE Sec. 13-17-27. Loc.
Plains Prod. No. 1 Daugherty (wildcat), SE SE SE Sec. 11-17-27. T.D. 428 ft.; W.O.C.
Premier Pet. Corp. No. 1-F Beeson, SW NW SW Sec. 31-17-30. S.D. rprs. 2,575 ft.
Premier Pet. Co. No. 2-F Beason, SW SW SW Sec. 31-17-30. C.&P.
Repollo Oil Co. No. 4-A Keel, SE NE SW Sec. 7-17-31. T.D. 3,586 ft.; acd.&S. 45 B.O.P.D.
Repollo Oil Co. No. 3 West, NE NE NE Sec. 3-17-31. Drlg. 3,704 ft.
W. K. Royalty No. 3-B State, C NE NW Sec. 16-17-31 Rng. csg. 3,063 ft.
H. T. Clark et al No. 1 Massie, C SW SW Sec. 27-18-29. T.D. 280 ft.
Continental et al No. 1 Brainard, NE NE NW Sec. 11 18-19. Drlg. 215 ft.
J. H. Steinberger No. 2 Hastie, SW SW SW Sec. 18-17-28. T.D. 560 ft.; B. 6 B.O.P.D.
Adkinson Oil Co. No. 1 Brainard, SE SW SE Sec. 5-18-27. T.D. 2,002 ft.; S.D.O.
L. E. Elliott No. 1 Elliott, SE SE SE Sec. 24-18-29. Drlg. 1,250 ft.
Etz & Cone No. 1 Nelson, SE SE NE Sec. 10-18-30. Drlg. 3,005 ft.
R. W. Fair No. 1 State, NE NE SW Sec. 1-18-29. Drlg. 1,115 ft.
Farmer & Tallmadge No. 1 Hubbell, NE SW Sec. 4-18-25. Drlg. 475 ft.
Franklin Pet. Corp. No. 1 Cappedge, NW SW NW Sec. 5-18-30. T.D. 2,360 ft.; B. 219 B.O. in 9 hrs.
Green Bay-Paton No. 1 Erwin, C SW SW Sec. 9-18-31. Drlg. 2,560 ft.
Harvey E. Yates No. 1 Travis, NE SE SE Sec. 6-18-29. T.D. 2,606 ft.; F. 40 B.O.P.D.
H. W. Martin No. 1 Gates, SE SE SW Sec. 15-18-30. Drlg. 2,620 ft.
Me-Tex et al No. 1-B Ballard, C NW NW Sec. 8-18-29. R.U. mch.
Plains Prod. No. 1 Swearingen, C NW NE Sec. 14-18-31. Drlg. 3,200 ft.
G. V. Price No. 2 Massie, SE SE NW Sec. 22-18-29. Drlg. 1,468 ft.
Martin Yates No. 1 Saunders, NE NE NE Sec. 12-18-29. Drlg. 2,959 ft.; 600 ft. O.I.H.
Rhodes Drlg. No. 2 Swearingen, C NE NE Sec. 14-18-31 (wtr. well). Drlg.
Texwell Corp. No. 1 Sullivan, C SE SW Sec. 23-18-31. Drlg. 1,875 ft.
Underwood & Sanders No. 1 Miller, C SE NE Sec. 5-18-29. T.D. 575 ft.
Me-Tex Supply Co. No. 1 State, NW NW NW Sec. 2-19-31. Drlg. 2,727 ft.
R. C. Underwood No. 1 Quillen-Bruce, NE NE SE Sec. 4-19-31. Drlg. 4,000 ft.
Trojan Oil Co. No. 1 Grant, SW SW NE Sec. 33-29s-25e. Drlg. 750 ft.
A. W. Rutter No. 1 State, SE SE NW Sec. 15-21-27. Rng. csg. 557 ft.

Chaves County

Mac T. Anderson No. 1 Warnock, C SW SE Sec. 17-15-27. T.D. 1,228 ft.; fsg. bit.
R. M. Baker No. 1 Baker, NW NW NW Sec. 19-10-30. C.&P.
Comanche Drlg. No. 1 Campbell, NE NE NW Sec. 15-11-26. Drlg. 1,291 ft.
Nay Hightower No. 1 Billingslea, C SW NE Sec. 28-11-30. T.D. 3,445 ft.; P.B. 3,430 ft.; acdg. and tstg.
New, Russell & Wood No. 1 Sterrett (wildcat), NW SE NW Sec. 29-11-25. T.D. 901 ft.; acd.; no increase; to deepen.
Tarkenton Bros. No. 1 Peters, SE SE NW Sec. 33-11-25. W.O. csg. 906 ft.
Western Minerals, Inc., No. 1 Dow (wildcat), C SW NW Sec. 27-10-30. Spdg.

Luna County

O. D. Berry No. 1 Berry, SE SE SW Sec. 33-22s-10w Drlg. 300 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 Pajarita, Sec. 22-9n-1e. Drlg. below 1,200 ft.

San Juan County

Continental Oil Co. No. 91 Rattlesnake, C NW NW Sec. 1-29n-19w. Drlg. 350 ft.
Al Greer No. 2 Thompson, SW SE SW Sec. 10-30n-11w T.D. 1,065 ft.; rng. 6⅝-in.
Geo. Goodwin No. 1, NE NW NW Sec. 16-30n-11w. Drlg. 980 ft.

San Miguel County

Ben E. Keith No. 1 McCune, SW SE SW Sec. 32-16n-12e. Drlg. 375 ft.
Southwest Drlg. Co. No. 1 Conchas, NW NE Sec. 34-17n-21e. Drlg. 1,850 ft.

Torrance County

Drice Co. No. 1 Garland, NE SE Sec. 32-7n-7e. Drlg. 1,860 ft.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE Sec. 19-5n-3e. Cg. 1,794 ft.
Joiner Oil Corp. No. 1 San Clement, C NE SE Sec. 23-7n-1e. T.D. 5,606 ft.; set whpstk.; drlg. by D.P.

COLORADO

Boulder County

J. A. Warren No. 3 Maxwell, NW NE NW Sec. 24-1n-17w. Spd. on May 24, 1939.
Reynolds & Rohr No. 1 Thomas, SW SW Sec. 17-1n-70w. S.D.O. 2,138 ft.; will D.D. under management of Reynolds.

Fremont County

T. E. Maloney No. 1, SE SW Sec. 34-19s-69w. T.D. 100 ft.; trying to shut off water; 6⅝-in. set at 103 ft.
Waterville Oil Co. No. 2 Persons, CWL NE NE Sec. 34-19s-69w (cor.). Drlg. 100 ft.

Garfield County

Roaring Fork Oil Co. No. 1 Patterson, SW NE NE Section 36-7s-88w, which was shut down at 2,007 ft. in basal Pennsylvania beds last fall, is preparing to resume. Contract for deepening the well has been let to Ainsworth Drilling Co. of Wichita, Kans., and light rotary equipment used by this contracting firm in the nearby Routt County coal fields is being moved to Roaring Fork.

La Plata County

Nick Spatter No. 1-X Bryce, C SW SW Sec. 32-33n-9w. T.D. 2,352 ft.; rerng. 8¼-in. to bttm.

Las Animas County

Hulme, Johnson & Allison No. 1 Azar, SE SE NW Section 27-34s-58w, resumed from 1,285 ft. and is drilling 1,470 ft.; 10-in. set at 1,282 ft.

Mesa County

Continental Oil Co.-California Co.-Amerada Petroleum Corp. No. 1 David B. Miller, SW SW NW Section 36-8s-91w, is preparing to resume drilling operations at 9,410 ft.

Moffat County

Cooperative Oil & Gas Co., headed by Joseph Ahern of Denver, has started a well in West Axial basin on the Gossard farm in CWL E½ E½ Section 29-5n-93w. It is to be a cable-tool operation and will be drilled with company tools. This is an important test and will be watched with interest by Rocky Mountain oil operators. Its objectives are the productive Cretaceous and Jurassic sands of the western slope oil fields.

C. R. Privett No. 1 Sutton, NE NE SW Sec. 1-5n-96w. T.D. 1,164 ft.; res. after winter S.D.; U.R. 8¼-in. for F.S.O.
MacKinnie Oil & Drlg. Co. No. 1 Coles, SW SW SE Sec. 1-3n-92w. Moving in 4⅞-in.; T.D. 3,484 ft. (cor depth).
J. S. Warner No. 1 Baker, NE NE SW Sec. 35-5n-96w. Spd. and S.D.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE Sec. 34-11s-75w. T.D. 6,975 ft.; fsg. blr.

Pueblo County

Eden O. & G. Co. No. 1 Horse Creek Ld. & Cattle, SW SE Sec. 29-19s-64w. S.D. 2,105 ft.

Rio Blanco County

Texas Co.-California Co. No. 2 Unit, NW SE SW Sec. 27-3n-94w. Rng. 13⅜-in. csg. to 720 ft.
Buford Oil Co. No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 3,645 ft.; M.I. 6¼-in. to res.

WYOMING

Big Horn County

Ohio Oil Co. No. 1 Syverson, Sec. 34-54n-93w (SE SW NW Lot 53). Moving in rotary.
Frank S. Scott No. 1 Robertson, SE SE SE Sec. 6-54n-93w. Drlg. 250 ft. in Chugwater.
Yale Pet. Corp. No. 2 Yates, Lot 57 (NW SW) Sec. 34-56n-97w. Swbg. at 4,100 ft.; will probably acd.
Mule Creek Oil Co. No. 1 Sessions, Lot 53, (NW NW) Sec. 34-56n-97w. Fsg. drill pipe; T.D. 3,387 ft.
Libby-Keoughan No. 1 Sheets, SE NE SE Sec. 9-55n-96w. Cleaned out to bttm. at 3,440 ft. and drlg. ahead.
A. L. Rankin No. 1 Karjala-Rankin, C SW NW Sec. 10-54n-94w. S.D. in Amsden 790 ft.

Carbon County

Sinclair-Wyoming Oil Co. No. 13 Wertz, NE NW NW Sec. 7-26n-89w. Drlg. 2,165 ft.
Producers Oil Co. No. 1 Lake Valley, CNL Sec. 14-20n-88w. Drlg. 2,295 ft.; carrying 10-in. at 2,200 ft.

Converse County

New Era Fuel Co. No. 1 Simonson, NW NE SE Sec. 16-32n-68w. T.D. 640 ft.; prep. to run 8¼-in. to bttm.
Wyshawn Oil Co. No. 2 Lindley, C SW SW Sec. 35-32n-69w. T.D. 2,580 ft.; fsg. D.P.
W. W. Austin et al No. 1 Pfister, SW NE NW Sec. 20-32n-68w. T.D. 713 ft.; cmtd. 5⅛-in. at 710 ft.; S.G. in sdy. sh. 710-13 ft.
New Era Fuel Co. No. 2 Gaspar, CNL NW SW Sec. 25-32n-69w. Cg. 750 ft.
New Era Fuel Co. No. 1 Pestal, SE NE NE Sec. 32-32n-69w. C.O. 420 ft. to run 8¼-in.; (formerly Fred Bunker).

Fremont County

Hall & Olinger No. 5 Govt., NW NE Sec. 33-38n-93w. Drlg. 254 ft.
Lincoln O. & G. Co. No. 5 Tribal, C SW NE Sec. 23-1s-1e. T.D. 492 ft.; 2 B.O.P.D. in Bentonite at 173-74 ft.; bailed 10 B.O.P.D. initial in sdy. sh. at 472-85 ft.; will D.D. 50 ft.
Pilot Oil Co. No. 8 Hoffman, C SW SW Sec. 22-3n-1w. Drlg. 230 ft.
H. Kenyon Burch No. 9 Tribal, C NW NW Sec. 27-3n-1w. T.D. 1,212 ft.; P.B. to recomp. at 732-50 ft. where it made 13 B.O.P.D. in June 1938.
Consolidated Oil Properties No. 3 Ewart, C SW SE Sec. 16-1n-1w. T.D. 1,245 ft.; U.R. 6⅝-in. at 800 ft.
Frank Pouppirt No. 2 Fidelity Tr., NW NW SW Sec. 27-3n-1w. S.D. 1,200 ft.

Hot Springs County

Columbus Oil Co. No. 2 Govt., SW NW Sec. 11-44n-98w. R.U.C.T.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW Sec. 23-21n-117w. Drlg. 1,790 ft.

Natrona County

Connelly Drlg. Co. No. 1 Stafe, SW SW NW Sec. 36-30n-81w. T.D. 1,268 ft.; R.U.C.T. to D.D.
General Pet. Corp. No. 1 Govt., C NW SE Sec. 21-35n-77w. T.D. 8,511 ft.; P.B. to test upper formation.
Summit Oil Co. No. 2 Govt., NW NE NE Sec. 21-33n-80w. Drlg. 230 ft.

Niobrara County

Continental Oil Co. (Buck Creek Oil Co.) has abandoned its test on the Ant Hills structure, No. 1 Dela-

hoyde, CNL NE NE of Section 25-37n-63w, in pink lime at 6,825 feet. This well was completed in March of 1928 at 4,118 ft. for 30 bbl. oil per day. Minnelusa Oil Corp. No. 2 Joss, SE NE SW of Section 6-35n-65w, was completed for an initial production of 30 bbl. oil an hour at a total depth of 5,352 ft. The top of the Leo was logged at 5,154 ft. Elevation of the rotary table 4,436 ft.

Argo Oil Corp. No. 1 U. S.-40, NW NW SW Sec. 8-35n-65w. Moving in rotary (first report).
Continental Oil Co. No. 4 Apex-O.P.C.-4, SE SE NW Sec. 35-36n-65w. Drlg. shale 3,648 ft.; top Dakota 3,500 ft.
Continental Oil Co. No. 9 Rohiff, SE NE SE Sec. 31-36n-65w. Drlg. 900 ft.
Continental Oil Co. No. 15 Tom Bell Cattle, C SW SW Sec. 34-36n-65w. Drlg. sandy shale 5,178 ft.; top basal Sundance 4,070 ft.; top Minnekahta 4,740 ft.; top Converse 4,840 ft.
Ohio Oil Co. No. 11 Putnam, SE SE SW Sec. 33-36n-65w. Drlg. 4,595 ft.; top Red Beds 4,180 ft.
Continental Oil Co.-Buck Creek Oil Co. No. 8-B Schuricht, SW NW SE Sec. 6-35n-65w. Drill pipe stuck 4,905 ft.
J. E. Manning No. 1 Hewitt-Govt., NW SW SW Sec. 4-35n-65w. Digging C.&P.
Continental Oil Co. No. 3-B Dieiman, SW SE NW Sec. 8-35-65w. Drlg. anhydrite and hard sand 5,585 ft.; 7-in. cmtd. 5,549 ft.
Minnelusa Oil Corp. No. 2 Joss, SE NE SW Sec. 6-35n-65w. T.D. 5,275 ft.
F. F. Hintze et al No. 1 Wright-Govt., C NW SE Sec. 30-36n-63w. T.D. 4,964 ft.; P.B. to 4,190 ft.; redrld. to 4,245 ft.; rng. pkr. to test Dakota.
Fall River Roy. & Prod. Co. No. 1 Govt., CSL SE SE Sec. 35-40n-61w. Drlg. 1,585 ft.; 12½-in. at 1,000 ft.

Sublette County

California Co. No. 1 Unit 1, C SW NE Sec. 14-31n-109w. Drlg. Wasatch formation 4,050 ft.
Wyo. Pet. Corp. No. 1 Budd, C NE NE Sec. 10-29n-113w. T.D. 1,695 ft.; rebldg. rig; M.I. new boiler to res.
Texas Co.-Frontier Pet. Co. No. 1 Govt. Unit, SE SE SW Sec. 1-28n-114w. Drlg. dark gray shale 8,104 ft.
Yellowstone Oil Co. No. 1 Budd, C SE SE Sec. 6-30n-112w. Drlg. 210 ft.

Sweetwater County

Sinclair-Wyoming Oil Co. No. 84-A, SW NW NW Sec. 11-26n-90w. Drlg. 206 ft.; cmtd. 13-in. conductor pipe 45 ft.
Salegna Oil Co. No. 1 Union Pacific, C SW SW Sec. 10-20n-104w. T.D. 5,230 ft.; set whpstk. at 2,836 ft.

Weston County

Upton Trust Co. No. 1 Hockett, NE NE Sec. 23-47n-64w. Preparing to set 6¼-in. 300 ft. through water sand.

MONTANA

Carbon County

R. R. Tarrant No. 3 Govt., C SW NW Sec. 4-6s-18e. Drlg. 1,150 ft. in 12½-in. hole; good show gas 1,085 ft.
Alex Beaton No. 1, CSL SE SE Sec. 23-6s-23e. Drlg. 1,600 ft. in 8½-in. hole.
Miracle Oil Co. No. 2 Govt., CWL NE SE Sec. 3-6s-23e. T.D. 2,381 ft.; fsg.; tools stk. at 1,600 ft.

Glacier County

R. C. Tarrant No. 3 Yunck, SW SW NW Sec. 12-34n-6w. Rig on location (first report).
K. D. Pardee No. 4 Tribal 179, SE NE SE Sec. 12-32n-6w. Drlg. 2,125 ft. (corrected operator).
Santa Rita O. & G. No. 2 Govt. (078695-B), C SE NE Sec. 29-33n-5w. Drlg. 1,000 ft. with 10¾-in. csg cmtd. 683 ft. with 83 sacks; top Colorado 690 ft.
Dakota-Montana Oil Co. No. 2 Gilham, NE SE NE Sec. 3-34n-6w. Drlg. 2,325 ft.
Texas Co. No. 2 Hessler, CSL NE NE Sec. 19-33n-5w.. Drlg. 1,020 ft.; 10¾-in. csg. cmtd. 649 ft. with 50 sacks; top Colorado 590 ft.
Glacier Prod. Co. No. 1 Larson, CEL NE NW Sec. 35-36n-6w. Drlg. 1,210 ft.; 10¾-in. csg. cmtd. 762 ft. with 50 sacks; top Colorado 740 ft.
Glacier Prod. Co. No. 2 Hawkins, NE NE SW Sec. 17-33n-5w. Straightening hole at 205 ft.
Glacier Prod. Co. No. 3 Corrigeaux, C SE SW Sec. 21-33n-5w. Drlg. 2,050 ft.
A. R. Pardue No. 2 Tribal-170, NW SW SW Sec. 7-32n-5w. Spudding at 150 ft.
R. C. Tarrant No. 4 State, SE NE SE Sec. 36-34n-6w. Spudding at 375 ft.
A. B. Cobb No. 1 Vargo, C SE NE Sec. 19-37n-4w. Drlg. 2,335 ft.; 8⅝-in. csg. set 2,305 ft.
Santa Rita O. & G. No. 2 Govt., SW SW NE Sec. 7-32n-5w. Drlg. 2,867 ft.
Tarrant-Wyley No. 2 Connolly, C SW NE Sec. 31-34n-5w. Drlg. 2,100 ft.

Teton County

Zodiac Oil Co.-Gulf States Oil Co. No. 1 Kellogg, NE NW NE Sec. 33-28n-5w. Shot with 4 qt. nitroglycerin through 3-in. liner 2,835-41 ft.; well showed a small amount black oil with very little gas; will acidize and test; top Madison 2,835 ft.; cannot get within 35 ft. of bottom.

Toole County

Kevin-Sunburst had three completions the past week. Big West Oil Co. No. 9 Dahlquist, C NE NW Sec. 28-35n-3w, was completed in lime at 1,735 ft. for 25 bbl. oil per day, pumping, with a trace of water after shooting with 30 quarts of solidified nitroglycerin. The Ellis-Madison contact was logged at 1,721 ft. A. E. Crumley's No. 16 Fryberger, SE NE SW Sec. 24-35n-3w, pumped 2 bbl. oil per day, natural, and after acidizing with 1,000 gal. increased to 7 bbl. per hour with a trace of water. This well was drilled to a total depth of 1,607 ft. and reached the Ellis-Madison contact at 1,568-1,600 ft. G. M. Plotke's No. 2 Ward, SW SW SW Sec. 28-35n-3w, was completed for 15 bbl. oil per day, pumping, from 1,706 ft. after plugging back from 1,715 ft. It was treated with 1,000 gal. of acid before completion.

G. & A. Oil Co. No. 2 Krause, SE SE SE Sec. 9-35n-3w. Drlg. 480 ft. (first report).
Superior Pet. Co. No. 8 Govt., CEL NW NW Sec. 12-35n-3w. Drlg. 435 ft. (first report).
Coolidge & Coolidge No. 4-A State, NW NW SW Sec. 36-36n-2w. Rng. 7-in. csg. on top Sunburst sand at 1,528 ft.
Provel & Shea No. 2 Govt., SW NW SW Sec. 11-35n-3w. Drlg. 1,755 ft.; Sunburst sd. 1,525-67 ft. had show gas in top and show oil at base.
Fulton-Commonwealth No. 2 Thompson, SE NE SE Sec. 28-35n-3w. Shut in at 1,728 ft.
W. M. Cassidy No. 1 Phoenix, CNL NW NW Sec. 28-35n-4w. Shut down after deepening into saturated Madison lime from 2,325-58 ft.

Yellowstone County

Nelson Story-Hogan, Ltd., No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; R.U. to res.; formerly Signal O. & G. Co.

UTAH

Cane Creek Oil Co. No. 1 Govt., NW SW Sec. 31-26n-21e. T.D. 3,090 ft.; W.O. 6⅝-in.

Summit County

Longwell Pet. Co. No. 1, SE SW SE Sec. 35-3n-5e. Res. at 2,876 ft.; drlg. 2,965 ft.

Ohio Fields

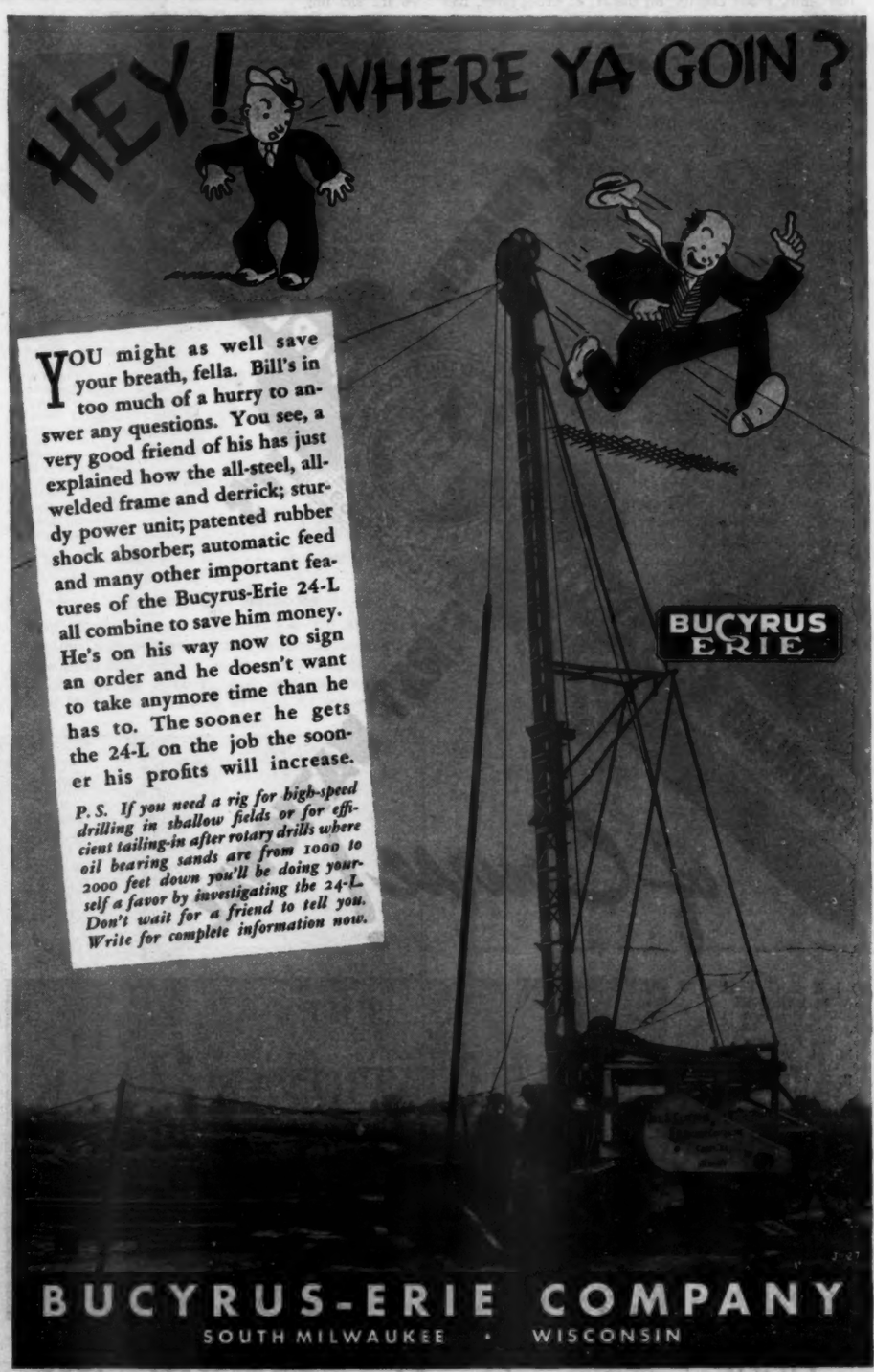
(Continued from Page 59)

Johnson No. 1 B. P. Townsend is good for an open flow of 1,250,000 cu. ft. from the Maxton sand at 1,031-47 ft. Rome Township, G. & K. Oil Co. No. 2 P. W. Brosvenor, Section 30, is a 1-bbl. pumper in the first Cow Run at 473-92 ft.

In Fairfield County, Berne Township, City Natural Gas Works No. 1 Phil Martin Heirs, Section 9, found the Clinton sand dry; total depth 2,121 ft.

In Licking County, two Clinton sand gas wells were completed northeast of Newark in Section 25, Mary Ann Township. Hoover Bros. No. 1 George F. Pound gaged 962,000 cu. ft. open flow from sand at 2,570-2,605 ft. Allen Willey and others No. 2 Frank Wince has an open flow of 1,330,000 cu. ft. from sand at 2,566-91 ft.

In Muskingum County, Brush Creek Township, Gas Producing Co. No. 1 Clyde Swingle, Section 17, found the Clinton sand dry and badly broken; total depth


HEY! WHERE YA GOIN?
YOU might as well save your breath, fella. Bill's in too much of a hurry to answer any questions. You see, a very good friend of his has just explained how the all-steel, all-welded frame and derrick; sturdy power unit; patented rubber shock absorber; automatic feed and many other important features of the Bucyrus-Erie 24-L all combine to save him money. He's on his way now to sign an order and he doesn't want to take anymore time than he has to. The sooner he gets the 24-L on the job the sooner his profits will increase.
P. S. If you need a rig for high-speed drilling in shallow fields or for efficient tailing-in after rotary drills where oil bearing sands are from 1000 to 2000 feet down you'll be doing yourself a favor by investigating the 24-L. Don't wait for a friend to tell you. Write for complete information now.
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4,010 ft. In Muskingum Township, Ellis Coal Co. No. 1 Lewis A. Miller, SW part of third quarter, made an open flow of 100,000 cu. ft. of gas from the Clinton sand at 3,611-56 ft.

In Medina County, Chatham Township, Preston Oil Co. No. 30 B. B. Parent, Lot 5, Tract 16, made 45 bbls. of oil the first 24 hours after the shot in Berea sand at 226-381 ft.

In Perry County, Jackson Township, Kissling Drilling Co. No. 1 Joseph Metzgar, Section 1, had a small showing of gas in the Berea and was abandoned at 918 ft. Reading Township, Ohio Fuel Gas Co. No. 2 Mary Hanlan, Section 8, has an open flow of 390,000 cu. ft. in the Clinton sand at 2,996-3,008 ft.

In Tuscarawas County, Dover Township, Brendel Producing Co. No. 2 Columbia Fire Clay, Lot 9, made an open flow of 1,770,000 cu. ft. of gas from the Clinton sand at 4,737-4,815 ft.

Lima Field

The deep test of the Sun Oil Co. in Section 13, Plain Township, Wood County, on the H. E. Cross farm, had 678 ft. of Trenton rock, passing through the bottom at 1,793 ft. The Green shale was drilled at 1,793-1,802 ft. There was no showing of oil, gas or water. Top of St. Peter sand was at 1,829 ft., with 130 ft. of water in the hole at 1,830 ft., and 1,000 ft. of water at 1,875 ft. It is still drilling.

In Seneca County, Bloom Township, A. J. West has started a test on the W. C. Stahl tract in Section 27.

West Texas Fields

(Continued from Page 67)

2,773-2,990 ft., 503 bbl. Stanolind Oil & Gas Co. No. 3 Brown, 2,253-2,377 ft., 491 bbl. Wallace No. 1 Avery. dry and abandoned at 2,118 ft. Western Well Service Co. No. 6 Lackland, 1,978-2,102 ft., 168 bbl.

Gaines County

M.B.K. Drilling Co. No. 4 A. L. Wasson, 4,914-90 ft., 1,153 bbl. Continental Oil Co. No. 3-51 Wasson, 4,940-90 ft., 837 bbl.

Upton County

G. H. Nelson No. 1 A. King, abandoned location.

Yoakum County

Humble Oil & Refining Co. No. 13 H. O. Wooten, 4,928-5,150 ft., 1,154 bbl. Tide Water Associated Oil No. 4 Mrs. Herman Koontz, 4,946-5,130 ft., 1,048 bbl. J. W. Murchison No. 7-B Elliott, 4,821-5,004 ft., 894 bbl. Humble Oil & Refining Co. No. 3 J. H. Lynn, 4,940-5,110 ft., 434 bbl.

Winkler County

Gulf Oil Corp. No. 70 Daugherty, 2,903-3,025 ft., 86 bbl. Gulf Oil Corp. No. 31 Keystone, 3,265-3,441 ft., 262 bbl. Magnolia Petroleum Co. No. 229 Walton, 3,160-3,230 ft., 362 bbl. Magnolia Petroleum Co. No. 230 Walton, 3,198-3,270 ft., 228 bbl. Magnolia Petroleum Co. No. 231 Walton, 3,195-3,259 ft., 173 bbl. Skelly Oil Co. No. 30 Halley, 2,700-2,811 ft., 832 bbl. W. K. Royalty Co. No. 6-B Walton, 2,890-3,050 ft., 1,440 bbl.

WEST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Brown County

Hickey No. 1 Newton, temporarily abandoned at 1,015 ft. Newburn No. 1 Falkner, dry and abandoned at 1,960 ft. Western Wells Service Co. No. 1 Curry, dry and abandoned at 1,304 ft.

Callahan County

McAdams & Ely, trustee, No. 1 Irwin, dry and abandoned at 4,512 ft. Ungren & Frazier No. 1 Hutchinson, dry and abandoned at 1,182 ft.

Coleman County

Aitken & Hultgren No. 1 Koenig, dry and abandoned at 400 ft. Green & Owens No. 3 Westbrook, 1,937-40 ft., 15 bbl. Mace & Shite No. 1 Stevens, dry and abandoned at 2,007 ft.

Fisher County

F. W. Bennett No. 1 Martin, junked and abandoned at 2,240 ft.

Jones County

Fain-McGaha Oil Corp. No. 4 Olsen, 3,227-30 ft., 492 bbl. Petroleum Production No. 3 Steffens, 1,864-66 ft., 500 bbl. Tarvers Petroleum Corp. No. 1 Swanson, dry and abandoned at 3,436 ft. Ungren & Frazier No. 1 Cox-Hamilton, 3,254-56 ft., 161 bbl.

Palo Pinto County

Allen & Richie No. 1 fee, 1,459-72 ft., 10,000,000 cu. ft. of gas.

Shackelford County

Cody & Edwards No. 1 Hickman, junked and abandoned at 550 ft. George Callihan No. 1 Powers, dry and abandoned at 1,948 ft. Cunningham & Barton No. 1 Sanders, dry and abandoned at 1,094 ft. Lawson Petroleum Co. No. 8 Lee, dry and abandoned at 1,054 ft. Roeser & Pendleton and Continental No. 33-A-85 Cook, 1,266-76 ft., 82 bbl.

Taylor County

Robertson No. 1 Bowles, abandoned location.

PANHANDLE FIELD COMPLETIONS

(24-hour gage)

Carson County

Magnolia Petroleum Co. No. 54 fee No. 244, 3,000-3,155 ft., 406 bbl. Skelly Oil Co. No. 93 Shafer Ranch. 3,090-3,170 ft., 584 bbl. Texoma National Gas Co. No. 7-S H. Schafer, 2,520-2,660 ft., 40,000,000 cu. ft. of gas.

Hutchinson County

Gulf Oil Corp. No. 92 Dial, 3,010-25 ft., 141 bbl. Pennawa Oil Co. No. 1 T. J. Thompson, 3,025-90 ft., 20 bbl. Tims-Robinson Oil Co. No. 1 W. B. Haile, 2,930-3,005 ft., 20 bbl.

Lipscomb County

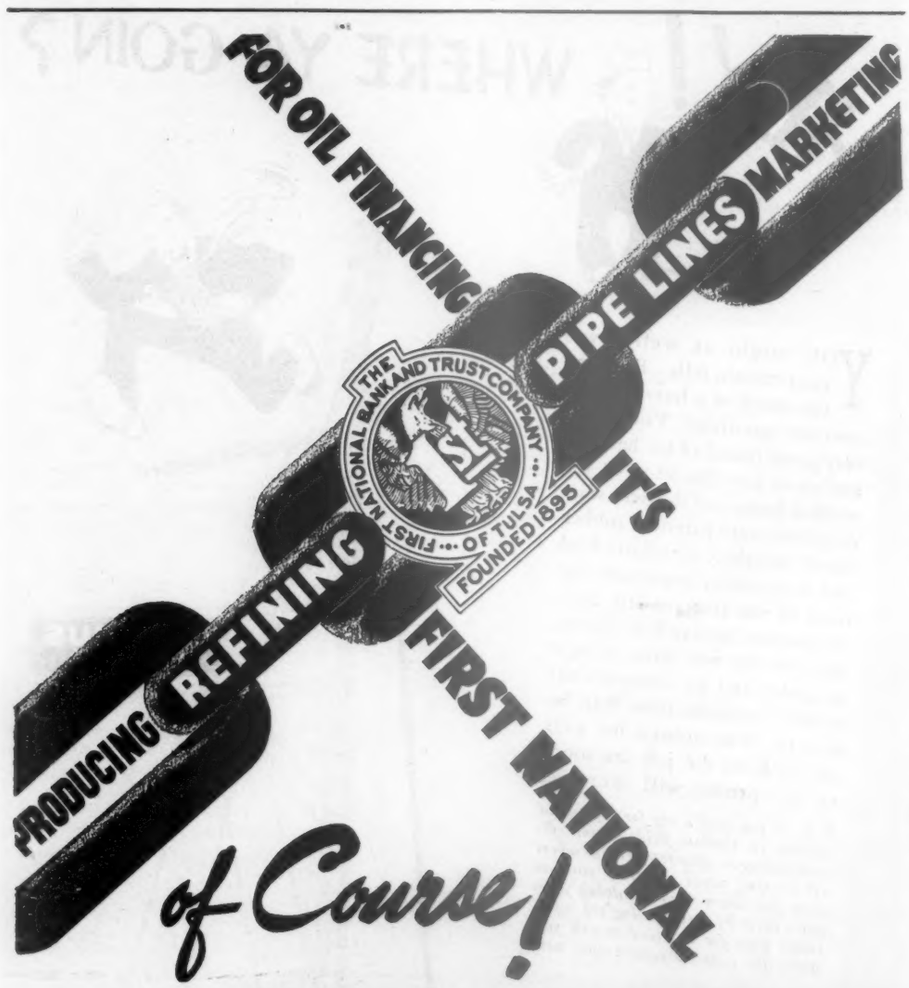
Darrouzett Oil Co. No. 1 Etta B. Pugh, dry and abandoned at 3,401 ft.

Moore County

Texoma Natural Gas Co. No. 1 J. S. Schlee, 2,988-3,466 ft., 18,653,000 cu. ft. of gas.

Wheeler County

Magnolia Petroleum Co. No. 1 J. J. Perkins "C," 2,458-65 ft., 337 bbl. H. H. Vaughn No. 1 T. H. Loter, 2,110-2,196 ft., 15,633,000 cu. ft. of gas.



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Kansas Developments

By DAL DALRYMPLE

Open Russell, Barton County Pools; Complete Hittle Wells

Discoveries of the past week in Kansas included three new pools, one in Barton County and two in Russell County, and extensions to several old productive areas. A new pay zone was uncovered in the South Burnett pool in Ellis County.

C. Elmer Ash & Crown Petroleum Co. No. 1-B Koch, NE NE NE Section 23-20-12w, wildcat 3 miles south of Ellinwood in Barton County, made initial potential of 273 bbls. of oil daily from Arbuckle lime at 3,358 ft., total depth. Nearest production is in the Marchand pool, 1 mile eastward. The new area has been named the Koch pool by the Corporation Commission.

The East Neidenthal pool in Russell County was opened at Phil-Han Oil Co. No. 1 Reinhardt, SE NE NE Section 24-14-15w. It found Arbuckle lime at 3,250 ft., total depth 3,258 ft., and, after acidizing with 500 gal., make initial potential of 506 bbl. of oil.

George R. Ballou and others No. 1 Mudd, NE cor. Section 6-15-14w, opened a Lansing lime productive area in Russell County which has been designated as the Mudd pool by the Corporation Commission. It made daily potential of 570 bbl. of oil at total depth of 3,180 ft. in Lansing lime. The new area is ½ mile south of the East Big Creek pool, producing from Arbuckle lime.

Central Petroleum Co. No. 4 Hadley, NE NE SE Section 12-11-17w, uncovered a new producing horizon in the South Burnett pool, Ellis County. It was bottomed at 3,162 ft. in Lansing lime and made initial potential of 1,163 bbl. of oil. Other production in the pool is from Arbuckle lime.

Power Oil Co. and Olsen Oil Co. continued testing at No. 1 Van Patten, C NE Section 26-4-21w, discovery well in Norton County and farthest northwest producer in the state. It was estimated good for 200 bbl. of oil daily from Lansing-Kansas City lime, through perforations in pay zones at 3,475-82 ft. and 3,487-96 ft. Gravity of the oil was 27°.

Extension of the Hittle pool in Cowley County appeared imminent at Arthur Brewer and others No. 1 Hughes, SE NE SE Section 20-31-4, ¼ mile southwest of the Harbar-Waite 17,000-bbl. producer which recently extended the pool westward. Oil from Arbuckle lime rose about 500 ft. in the hole in 12 hours.

Estimated Daily Production

Estimated daily production for Kansas for the week ending May 27, and for the preceding week, was as follows:

	Bbl.	
	May 27	May 20
Oxford City	950	1,150
Burrton	10,100	10,275
Ritz-Canton	5,650	7,225
Graber	2,225	3,875
Hollow-Nikkel	2,725	3,500
Lerado	775	850
Voshell	1,675	1,850
Wellington	2,025	2,500
Ellsworth County:		
Lorraine	1,100	2,025
Other pools	1,240	1,560
Rice-Barton counties:		
Bloomer	2,325	2,900
Chase	3,600	4,250
Geneseo	3,250	3,700
Raymond	475	600
Silica	11,200	9,975
South Silica	2,125	2,325
Keesling	750	750
Wherry	4,125	3,550
Miscellaneous Rice	7,435	6,675
Miscellaneous Barton	8,590	8,445
Russell County	22,050	22,850
Sedgwick County	3,625	4,250
Ellis:		
Bemis	6,425	7,675
Miscellaneous	2,260	3,135
Kingman County	450	700
Stafford County	5,795	7,615
Greenwood County	8,950	9,750
Butler County	18,925	19,000
Other fields	20,930	22,595
Total Kansas	161,750	175,550

Among the Wildcats

Gulf Oil Corp. No. 1 Linke, C E½ NE SE Section 36-19-10w, wildcat three-fourths of a mile west of the Chase pool, Rice County, pumped 109 bbl. of oil, 148 bbl. of water in 8 hours, and made 24-hour potential of 327 bbl. of oil, with 447 bbl. of water. It had Arbuckle lime at 3,280-83 ft., total depth. It was classed as an extension of the Chase field.

Phillips Petroleum Co. No. 1 Proffitt, C E½ NE NE Section 8-20-9w, wildcat that opened the North Coldwater pool in Rice County late in April, was listed as a completion the past week. It was carried as a pool opener in The Oil and Gas Journal's Kansas reports in the issue of April 27. Arbuckle lime was found at 3,244-59 ft., total depth. It pumped 71 bbl. of oil and 27 bbl. of water in 8 hours, and made potential of 212 bbl. of oil, on retake potential test. Originally, it made potential of 133 bbl. of oil.

Central States Oil Co. and others No. 1 Crawford, NW SW NE Section 26-13-3w, Saline County wildcat, topped Hunton lime at 3,170 ft., Simpson zone 3,570 ft., Arbuckle lime 3,615 ft. and was dry and abandoned at 3,632 ft., total depth.

C. L. Sheedy and others No. 1 Long, SE SE SW Section 28-26-14, wildcat in Woodson County, was dry and abandoned at total depth of 1,550 ft. in sandy shale.

Kerlyn Oil Co. and others No. 1 McMoran, C SE NW Section 25-34-16w, wildcat 20 miles southeast of Coldwater in Comanche County, was a location. It is about 16 miles southwest of the Medicine Lodge field in Barber County. Indian Territory Illuminating Oil Co. is interested in the test.

Phillips Petroleum Co. No. 1 Kemmer, NW NW SE Section 16-18-10w, Rice County wildcat, was a location. Marylyn Oil Co. No. 1 Burke, NE NE SW Section 27-24-11, wildcat in Greenwood County, was moving in machine. Marylyn Oil Co. and others No. 1-A Hoard Ranch, SW NE NE Section 28-29-8, Butler County wildcat, was a location. Lucas & White Star Oil Co. No. 1-A Lucas, NE NW NW Section 14-28-6, wildcat in Butler County, was a location. Tide Water Associated Oil Co. No. 1 Junghanns, SE cor. Section 23-18-5, Marion County wildcat, was moving in machine.

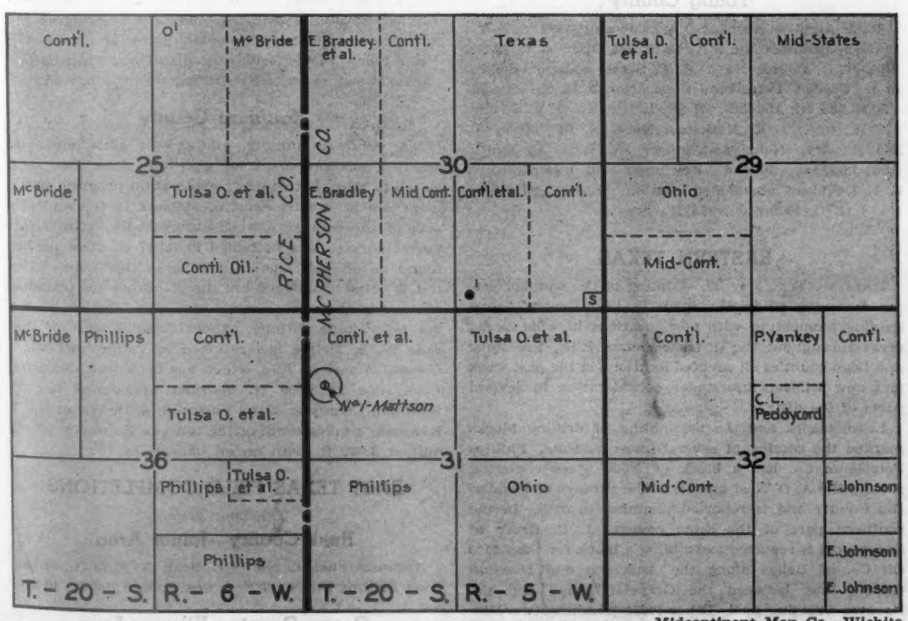
Cowley County

Willis Hartman and Tulsa Oil Corp. No. 5 Waite, NW NE SW Section 21-31-4, in the new extension area on the west side of the Hittle pool, Cowley County, flowed 2,604 bbl. of oil in 8 hours, making 24-hour potential of 7,811 bbl. Production was from Arbuckle lime at 3,342-50 ft., total depth. It is an east offset to the 17,508-bbl. producer recently completed by Barnett, Connelly & Harbar Drilling Co. at No. 1 Waite, NE NW SW Section 21.

Cities Service Oil Co. No. 1 Waite, SE SW NW Section 21, north offset to the Barnett-Connelly-Harbar gusher and northwest of the Hartman-Tulsa well, made daily potential of 8,500 bbl. of oil after bottom-hole pressure bomb test. It was bottomed at 3,372 ft. in Arbuckle lime.

Arthur Brewer No. 1 Sherwood, SW NW NW Section 27-31-4, topped Arbuckle lime at 3,463 ft., had sand at 3,471-75 ft., total depth, and was dry and abandoned.

(Continued on Page 89)



Midcontinent Map Co., Wichita

The Bornholdt pool in McPherson County was extended southwestward at Continental Oil Co., B. B. Blair and Bradley Brothers No. 1 Mattson, Section 31-20-5w

Forest City Basin Activity

SMITHVILLE, Mo., May 29.—Work has started at the first wildcat oil test to be drilled in Platte County, Missouri, since the current Forest City basin activity developed last summer.

It is Berry Brothers of Tulsa No. 1 Rule, C SW SW Section 20-53-33w, about 3 miles west of here on the Smithville dome. It was spudded May 28 and was drilling below 125 ft. early today. Location is on a block assembled by J. A. Turner of Tulsa and purchased from him by Berry Brothers. A. W. Swift &

(Continued on Page 79)

North and East Texas

By D. H. STORMONT

Widespread Wildcatting in Northern and Eastern Areas

WICHITA FALLS, Tex., May 29.—Continued testing of Archer County's prospective Caddo lime oil pool, the staking of two new tests in the recently opened Griffin pool and activity in Cooke County's Walnut Bend pool and Montague County's Nocona area, centered the attention of operators in the North Texas district as the week closed.

British American Oil Producing Co. plans to acidize No. 1 T. B. Wilson, Section 12, Block 3, H.&T.C. Survey, which is indicating a new deep Caddo lime oil pool in Archer County. The company has been testing the well on various sized chokes during the week to determine the best rate of flow. It is credited with having flowed 11 bbls. of oil an hour through 1/32-in. choke on tubing. Production is through perforations from 4,660 ft. to 4,680 ft.

In the new deep Strawn producing area opened north of the Hull-Silk area by E. P. Griffin, Deep Oil Development Co. and Griffin have staked location for No. 3 W. T. Waggoner Estate, Section 1, Block 4, H.&T.C. Survey, 852 ft. south of the same operators' No. 2 Waggoner which is drilling ahead toward the pay horizon. The operators also located No. 4 Waggoner in Section 1, 1,854 ft. south of the No. 3 location.

Cooke County

Third test to seek flowing production in the second and deeper Strawn-sand pay of the Walnut Bend pool, northeastern Cooke County, is Sinclair Prairie Oil Co. No. 10 Best, T. Toby Survey, in the southeast corner of the pool. This test afforded the regular pay section of the pool a 660-ft. south extension but is being carried deeper for a test of the lower section. It is one location south of the No. 8 Best which opened the deeper pay and was completed for 214 bbl. of oil daily, pumping. The other test headed toward the deep pay is the east offset to No. 8 Best, Cox & Hamon No. 1 Neu, B.B.B.&C. Survey, Abstract 180, on a Texas Co. farmout. This test found the first pay level with the other wells in the field, and was coring below 5,095 ft. as the week closed.

Montague County

Three wells are active in the Nocona area of Montague County. Rogers & Rogers No. 1 Benton & Wood is drilling ahead at 4,780 ft. in lime headed toward a sand believed to underlie the lime. The test showed production in the regular pay of the field at 4,663 ft. Stanolind Oil & Gas Co. No. 1 Zachery, west offset to the discovery well, is drilling around 2,100 ft. after topping the Canyon lime around 1,725 ft., or slightly higher than in the discovery well. Bridwell Oil Co. No. 1 Reynolds, 2 miles northeast of Nocona, is drilling below 3,700 ft.

Clay County

Prospects of a second and deeper producing horizon in the recently-opened Browning pool of Clay County appeared somewhat doubtful as the week closed. Shell Oil Co. No. 1 Davis, south offset to the discovery well, bailed 12 hours and showed no oil or gas. Test is bottomed at 5,100 ft. with casing cemented at 4,923 ft. The test missed the pay section of the Burns No. 1 Browning, discovery well in the field.

NORTH TEXAS COMPLETIONS

Archer County

S. H. Huggins No. 17 W. Ford, 1,001-04 ft., 5 bbl. Stanford and others No. 1 B. D. Ikard, 1,052 ft., dry.

Clay County

Harvey Drilling Co. No. 1 R. L. Hull, 1,450 ft., dry. Kimmell Lee & Co. No. 16 Mrs. L. Firestone, 1117-44 ft., 200 bbl. H. S. Moss No. 1 T. J. Parmley, 4,055 ft., dry. Perkins & Cullum No. 2 C. T. Taylor, 1,375 ft., dry. Sussex Oil Corp. No. 19 C. J. Shumake, 392-401 ft., 11 bbl. J. M. Tanner No. 8 G. D. Rigsby, 231-41 ft., 10 bbl.

Cooke County

Pace Petroleum Corp. No. 16 R. E. Aldridge, 1,182-1,207 ft., 50 bbl. George Ross & Co. No. 1 Bailey Inglish, 1,924 ft., dry. Schermerhorn Oil Co. No. 23 M. Kessler, 1,355-75 ft., 20 bbl. M. Staniforth No. 2 Voth, 1,710-17 ft., 64 bbl. Whitfield, Pearson & Grimes No. 6 Voth, 1,848-56 ft., 111 bbl.

Jack County

Danciger Oil & Refining Co. No. 8 S. M. Ivey, 3,113-83 ft., 550 bbl. Grace & Barrow No. 3 J. M. Bloodworth, 343 ft., dry. Bob Sullivan No. 6 C. J. Swasey, 370-75 ft., 10 bbl. Bob Sullivan No. 7 C. J. Swasey, 368-73 ft., 11 bbl. Welch Hill Oil Co. No. 1 G. T. Griffith, 487 ft., dry.

Wichita County

Ahrens and others No. 2 Osa F. Bailey, 551-65 ft., 12 bbl. G. G. Browning No. 3 Casper Guyer, 138-46 ft., 2 bbl. G. G. Browning No. 4 Casper Guyer, 312 ft., dry. G. W. Cooper No. 55 Waggoner, abandoned location. G. W. Cooper No. 33 Waggoner C, abandoned location. Deep Oil Development No. 4 R. J. Bradley, 3,656-3,775 ft., 932 bbl. Fain & McGaha Oil Corp. No. 9 E. P. Griffin B, 3,796-3,834 ft., 960 bbl. Hamilton-Worsham No. 3 W. F. Hamilton, 3,765-83 ft., 1,056 bbl. Mitchell Oil Co. No. 5 Sue Mitchell C, 1,400 ft., dry. Mitchell & Buzzard No. 14 Sue Mitchell, 1,445 ft., dry. Panhandle Refining Co. No. 8-A Reilly-Griffin, 3,769-3,830 ft., 192 bbl.

Wilbarger County

King Oil Co. No. 5 R. L. Castleberry, 2,630-47 ft., 536 bbl. Phillips Petroleum Co. No. 3 H. C. Shive, 3,194-3,211 ft., 528 bbl. Waggoner Refining Co. No. 24 W. T. Waggoner AA, 1,669-81 ft., 30 bbl. Waggoner Refining Co. No. 25 W. T. Waggoner AA, 790-803 ft., 10 bbl.

Young County

Paul Atchley No. 1 E. A. Edwards, 992 ft., dry. Christie Brothers No. 3 A. B. Street, 3,383-93 ft., 2,250 bbl. B. G. Collier No. 1 B. F. Scott, abandoned location. Cosden Petroleum Corp. No. 2 D. D. Sewell, 3,800-3,935 ft., 150 bbl. H. R. Loftin No. 1 Y. Swaim, 756 ft., dry. J. E. McDonald No. 1 S. R. Jeffery B, 900 ft., dry. Nehls and others No. 1 J. M. Smith, 3,961-4,072 ft., 30 bbl. Reichman and others No. 2 L. L. Davidson, abandoned location. Sparks and others No. 4 G. B. Hamilton, 925 ft., dry.

EASTERN TEXAS

DALLAS, Tex., May 29.—Coming of the summer season finds the wildcatting pace in East Central Texas gaining momentum with new locations in wide-spread areas throughout the district. Camp, Ellis, Freestone and Leon counties all counted locations in the past week and new wildcats are under consideration in several parts of the district.

Lease trades and the assembling of drilling blocks marked the coming of several more wildcats. Phillips Petroleum Co. has a block of 5,000 acres centering around the A. O' Neal and H. Crone surveys of Henderson County and is reported planning to drill. In the southern part of the same county, J. B. Greer of Shreveport is reported assembling a block for the Aloco Oil Co. of Dallas along the Anderson and Houston County line, between the Grapeland area and the Navarro Crossing pool. Other lease purchases were reported in Anderson, Cherokee, Smith and Hopkins counties.

Four new wildcats were located, one of which is drilling below 890 ft. In Ellis County, C. M. Beckner and others are drilling toward the Woodbine sand in their No. 1 H. A. Styles, A. Bullock Survey, 3½ miles west of Maypearl. The well is on a 120-acre tract in the northern part of the survey. Camp County's new operation was the H. S. Moss No. 1 W. D. Keeling, rigging up on the M. A. Esparcia Survey, 2 miles south of Pittsburg. It is on a 10-acre tract out of the east corner of the survey. Freestone County's test is the W. B. Johnson Drilling Co. No. 1 D. O. Nettles, W. Carter Survey, 4 miles southeast of Streetman and on a 291-acre tract. Leon County's portion of the Navarro Crossing field counted a new location when Humble Oil & Refining Co. staked No. 1 W. Johnson in the W. Little Survey. The Leon County portion of the field was opened several weeks ago by Humble No. 1 Swift which was gauged at 105 bbls. per day from the Woodbine sand.

Henderson County

Northwestern Henderson County's new Mabank pool, opened several weeks ago by Tyler & Smith and Richards & Holloway No. 1 Rowe & Baker, was given its first extension when Richards & Holloway, Inc., No. 1 Bauggus, J. Gardner Survey, 450 ft. southwest of the discovery, cored oil sand in the Woodbine at 3,152-56 ft. and ceased drilling at that depth to cement casing. The operators, together with Tyler & Smith, were preparing to move in machinery for No. 2 Rowe & Baker, 400 ft. west of the discovery well.

Navarro Crossing

A 1-mile north extension on the southeast end of the pool and a ½-mile northeast outpost on the northwest end of the pool featured developments in the Navarro Crossing Woodbine pool in Houston and Leon counties. Humble Oil & Refining Co. and Sun Oil Co. staked a location for No. 1 Wesley Johnson, 93-acre tract in the E. Little Survey, 2,000 ft. northeast of their No. 1 Swift, oil producer, which extended the pool into Leon County. Another outpost to the Leon County portion of the field was the Humble Oil & Refining Co. No. 1 Ella Gibson, 1 mile northeast of the discovery extension well. It is in the William Little Survey and will be started after the completion of the company's No. 1 Polen, east offset to the discovery, which is preparing to set casing after drilling into the pay section.

Kaufman County

One Kaufman County wildcat was abandoned and another was preparing to drill ahead as the week closed to keep that county's exploration program under way. About 3 miles west of Mabank in the southern part of the county, Atwood-Glaspy-Raphael No. 1 fee, Cortez survey, was bottomed at 3,347 ft. after having found no oil showings in drilling to that depth. The test is being abandoned but the operators are planning another in the same general area, the location having not been made definite. About 3 miles west of this area W. S. McGee has resumed operations on No. 1 General American Life, which has been shut down for some time at 3,083 ft. Another abandoned test in Kaufman County was the Valentine & DeArman No. 1 Bowman, 2 miles south of the town of Kaufman, which quit at 3,020 ft. with no oil indications.

EAST TEXAS FIELD COMPLETIONS

(One-hour gage)

Rusk County—Joiner Area

Arkansas Fuel Oil No. 14 E. Beall, 3,756-73 ft., 44 bbl. Cook Drilling Co. No. 7 F. J. Cox, 3,662-3,703 ft., 40 bbl.

Gregg County—Kilgore Area

Atlantic-General American No. 1-B Ella Hagler, 3,574-

(Continued on Page 82)

Oklahoma Operations

By DAL DALRYMPLE

Curb Wild Cement Gas Well; Test Discovery Near Hobart

A gas well in the Cement field, Caddo County, Oklahoma, was shut in at the week-end after blowing wild 22 hours and with two explosions, resulting in the death of a man. The well, Ray Stephens, Inc. No. 2 Farwell, SE SE SW Section 27-6-10w, on the west side of the field, had volume of gas estimated at 276,847,000 cu. ft. daily when pinched in. When first tested earlier in the week gas was estimated at 80,000,000 cu. ft. daily. Crude oil showing with the gas increased as the well continued to blow wild.

Kenneth Nelson, district superintendent for the operators, was injured fatally last Friday, May 26, when connections blew loose on the casinghead. He died in an ambulance en route to Anadarko.

About 1,500 ft. of steel tubing was cracked loose and blown from the hole the next day, being enmeshed in the derrick. With tubing out of the hole, workmen were enabled to shut in two master gates on the casing and curb the flow. The well probably will be killed and remainder of the tubing fished out.

The hole was bottomed at 5,653 ft., with 9-in. casing set at 5,605 ft. Tubing was run for initial production tests after plug had been drilled and the hole cleaned out.

While the Farwell still was running wild, throwing showers of sand and rock through the derrick, location was staked for B. E. Johnson and Lacy Rollins No. 1 N. T. Plummer, NE NE SW Section 33-6-10w, ½ mile south of the gasser. Hall & Briscoe, Inc., will be interested in the Plummer well, which will be drilled to Rowe sand or deeper. If it is a producer, it will open a considerable area to drilling.

The Kiowa County pool opener, Gled Oil Co. and Russell S. Tarr No. 1 Watkins, SW SW NW Section 20-7-17w, northeast of Hobart, was opened after a shutdown of several days and filled 800 bbls. of tankage, flowing from 65 to 75 bbls. of oil an hour through 2½-in. tubing, with 70 lb. back pressure. Gas was estimated at 1,000,000 cu. ft. daily. No water was showing. The flow was cut back to 4 bbl. of oil an hour, later shut in, and was to be prorated to 125 bbl. a day, wildcat discovery allowable of 15,000 bbl. already having been produced. Bell Oil & Gas Co. is taking the stored oil in trucks to its refinery at Grandfield. The well blew in April 14 and flowed uncontrolled for a week at an estimated 100 bbl. an hour. Ten-inch casing was cemented at 1,022 ft., with the hole bottomed at 1,055 ft., presumably in Viola lime.

Olson Oil Co. No. 2 Soldani, NE NE NW Section 24-26-4, western Osage County, found Burbank sand at 3,150-78 ft., total depth, and flowed at the rate of 10 bbls. of oil an hour, with about 14,000,000 cu. ft. of gas. It was shut in and operators were attempting to reduce the gas flow. It is in an old area west of the Burbank field, recently revived with completion of a small producer. The Olson company had started work at another test in NW NW NE Section 24-26-4.

Indian Territory Illuminating Oil Co. No. 1 Fillmore, SW SW SE Section 36-2s-19w, discovered a producing horizon at around 5,139 ft. in the Frederick area, Tillman County. The new pay is thought to be in either the lower Simpson or Arbuckle lime zones. Other production in the area is from Canyon lime at around 3,100 ft. Operators were preparing to test on pump. It swabbed at the rate of 300 to 350 bbl. of oil daily.

Wildcat Operations

R. Olsen Oil Co and others No. 1 White, C NE NE Section 30-11-1e, wildcat in the Newalla area, southeastern Oklahoma County, was completed, flowing an average of 200 bbl. of oil daily through tubing, with 15 to 20 bbl. of water. It topped Hunton lime at 6,002 ft., dolomite 6,410 ft., bromide 6,450 ft., first Wilcox sand 6,503 ft., second Wilcox sand 6,610 ft., total depth 6,636 ft. It was plugged back to 6,095 ft. in Hunton lime and flowed 231 bbl. of oil in 24 hours through tubing, cutting 20 per cent basic sediment. After tubing was pulled, it flowed 250 bbl. in 24 hours, with 28 per cent basic sediment. Packer was set at 5,900 ft., and it flowed 175 bbl. of oil daily, with 20 per cent water.

Starr Oil & Gas Co. No. 1 Morrow, SE SE SW Section 28-15-6, wildcat in Lincoln County, had Prue sand at 3,208-31 ft., total depth 3,270 ft., and was dry and abandoned.

Heimerich & Payne, Inc., No. 1 Johnson, SE SE SE Section 2-15-1e, wildcat in Logan County, found second Wilcox sand at 5,313 ft. and was dry and abandoned at 5,370 ft., total depth.

Marshall Strozier No. 1 well, Section 20-17-9, was reported to have opened a new productive spot about 2 miles from the Bruce pool, Creek County. It had Bartlesville sand at 2,530-43 ft., total depth, and was estimated good for 100 bbl. of oil daily.

Kerlyn Oil Co. No. 1 Butterly, NE NE SE Section 22-1n-1e, wildcat in Garvin County, originally bottomed at 3,705 ft. and deepened to 5,005 ft., where Schlumberger test revealed no showings, was completed for 2,600,000 cu. ft. of gas through perforations at 2,730-32 ft.

H. G. Marshall No. 1 Clellan, NE SW SE Section 26-1n-8, wildcat location in Coal County, was reported abandoned.

Johnson & Kemnitz and K. A. Ellison No. 1 Baker, NE NE SE Section 20-19-5w, wildcat east of Hennessey in Kingfisher County, was reported dry and abandoned at total depth of 7,323 ft. in second Wilcox sand topped at 7,298 ft.

Gulf Oil Corp. No. 1 Hendrie (Thomas), C W½ SW SW Section 21-24-4w, wildcat southeast of Hunter in northeastern Garfield County, was a location. It is to be a Wilcox sand test, with contract depth of 6,200 ft.

Cooper Drilling Co. and others No. 1 Miller, NW NW SE Section 4-17-4w, wildcat south of the Lovell area in western Logan County, was a location. C. R. Hoagland and others No. 1 well, SE SE SW Section 27-18-4, wildcat east of the Lovell area in Logan County, was building rig. Tide Water Associated Oil Co. No. 1 Keller, SE SE NE Section 27-29-1w, wildcat south of the Southeast Braman area, was a location.

Pottawatomie County

Tabor & Coleman No. 4 Miller, NE SE SE Section 29-7-5, St. Louis field, Pottawatomie County, pumped 492 bbl. of oil and 100 bbl. of water in 24 hours at a total depth of 4,148 ft., and operators continued testing.

Big Chief Drilling Co. No. 1 Green, NW SW SE Section 29-7-5, was bottomed at 4,137 ft., and pumped 240 bbls. of oil in 24 hours. Testing continued.

Mid-Continent Petroleum Corp. No. 4 Kah-Dot, NE NE SE Section 36-7-4, topped dolomite at 4,230 ft., total depth 4,305 ft., and was acidized with 5,000 gal. It pumped 270 bbl. of oil on completion test. It was shut in and when opened several days later started flowing with rods still in the hole. It flowed 1,432 bbl. of oil the first 24 hours and 1,598 bbl. the second 24 hours.

Same company's No. 3 Vieux, NE SW SE Section 31-7-5, swabbed 355 bbl. of oil daily at total depth of 4,126 ft., and was to be put on pump.

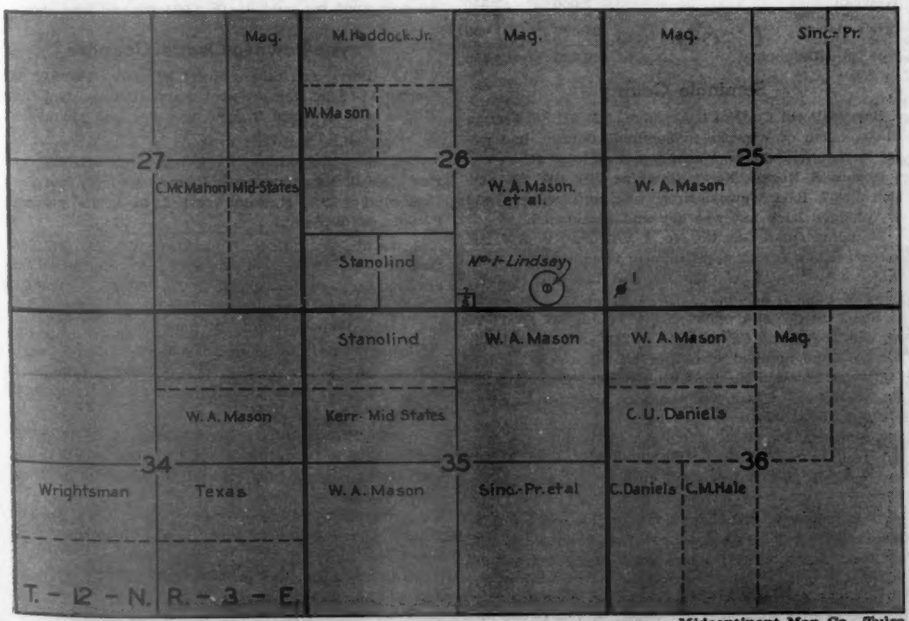
H. L. Berkey No. 1 Miller, NE NE NE Section 32-7-4, was bottomed at 4,282 ft. in dolomite and flowed 60 bbl. of oil the first hour.

J. F. Smith No. 1 McDaniels, SE SE NE Section 31-7-5, pumped 250 bbl. of oil daily at 4,153 ft., total depth.

Associated No. 5 Schrader, SW SW NE Section 6-6-5, swabbed 25 bbl. of oil an hour from dolomite at 4,102-40 ft., total depth.

Wells recently completed in the St. Louis field included:

Denver Producing & Refining Co. No. 2 Ray, NE SW



Midcontinent Map Co., Tulsa

Mason and others No. 1 Lindsey, Section 26-12-3e, wildcat near Meeker, Lincoln County, and northwest of the Shawnee pool, is near an old Wilcox sand well that produced 15,000 bbl. of oil before going dry

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NE Section 2-6-4, had Viola lime at 3,946 ft., total depth 4,030 ft., acidized, pumped 280 bbl. of oil.

H. L. Berkey and others No. 2 Bruno, NE NW NW Section 6-6-5, dolomite 4,060 ft., total depth 4,068 ft., acidized, 576 bbl. of oil.

Sinclair Prairie Oil Co. No. 5 Wolf, NW NW NW Section 29-7-5, twin well, total depth 3,200 ft., 15 bbl. of oil.

In the Avoca area, Atlantic Refining Co. No. 2 McCurry, NE NE SW Section 6-6-4, second Wilcox sand 4,487 ft., total depth 4,488 ft., 384 bbl. of oil.

New work in Pottawatomie County: H. L. Berkey No. 1-A Lawther, NE NE SW Section 33-7-4, rigging up rotary; J. F. Smith No. 2 Brandenberg, NE NE SW Section 3-7-4, drilling; F. W. Cooper No. 2-A Neighbors, NE SE SW Section 29-7-5, spudded; R. Olsen and others No. 2 Gillis, NW cor. Section 5-10-4, spudded; H. Marshall No. 1 Rose, SW NE NE Section 6-10-4, cellar, pits.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ending May 27, and for the preceding week, was as follows:

	Bbl.	
	May 27	May 20
Allen	6,325	6,500
Billings	5,500	5,750
Burbank	7,800	7,900
South Burbank	9,325	9,350
Balance Osage	17,750	17,900
Blackwell district	3,525	3,625
Bristow-Slick	7,125	7,450
Chandler	1,650	1,625
Crescent	3,525	3,150
Cromwell	3,025	3,000
Cushing-Shamrock	9,950	10,000
Duncan district	3,975	4,350
Edmond	4,950	5,275
Fish	4,525	4,000
Fitts	26,700	27,025
Jesse	2,425	2,400
Graham-Fox	3,950	4,100
Gray	850	875
Healdton	9,250	9,625
Hewitt	3,825	3,875
Keokuk	3,600	3,650
Konawa	1,225	1,200
Lucien	7,850	8,750
Moore	2,775	3,400
Oklahoma City	99,650	107,400
Olympic	3,025	3,225
Ramsey	4,500	4,350
Sasakwa	1,350	1,400
Sholem-Alechem	2,250	2,775
Seminole district:		
Bowlegs	8,475	8,650
Carr City	2,925	2,975
Dora	3,700	4,025
Earlsboro	4,850	4,975
South Earlsboro	575	600
East Earlsboro	4,175	4,150
Little River	7,300	7,275
East Little River	750	700
Maud	850	1,125
Mission	1,575	1,650
Seminole	8,050	8,075
East Seminole	1,325	1,425
Searight	2,625	2,500
Total Seminole	47,175	48,125
St. Louis-Pearson	37,250	37,500
Tatums	1,725	2,225
Tonkawa-Garber-Thomas	4,150	4,200
Wewoka	2,050	2,550
Yale-Jennings	3,700	3,725
Other pools	91,500	91,000
Total Oklahoma	449,725	463,250

Seminole County

Barnsdall Oil Co. No. 1 Aldridge, NE SE SE Section 31-9-8, north of Wewoka in Seminole County, had water in the hole and was abandoned at 1,880 ft.

Rogers & Rogers No. 1 Hawkins, SW SW SE Section 36-8-7, East Wewoka area, was bottomed at 3,436 ft., plugged back but was dry and abandoned.

Stanolind Oil & Gas Co. No. 1 Wilson, NW SW NE Section 4-5-6, Tyrola area, topped Viola lime at 3,177 ft., was bottomed at 3,260 ft., and had initial daily yield of 125 bbl. of oil.

Wood Oil Co. and others No. 1 Tobin, SW SW NW Section 22-7-5, had Calvin sand at 2,775 ft., total depth 2,803 ft., and pumped 88 bbl. of oil daily.

Charles Newsom No. 2 Smith, SE NE NE Section 20-7-6, West Little River area, was dry and abandoned at 4,352 ft., total depth.

Commercial Drilling Co. and others completed a 742-bbl. well at No. 4 Fish, NW NW NE Section 30-7-3, Fish pool. It had Wilcox sand at 4,121 ft., total depth 4,124 ft.

Dave Malarnee and others No. 6 Shelton, SE SW NW Section 33-7-6, Dora area, topped Boggy sand at 2,942 ft., total depth 2,968 ft., and pumped 70 bbl. of oil daily.

Magnolia Petroleum Co. No. 1 Harjo, NW SW NW Section 35-10-6, was dry and abandoned at 3,824 ft., total depth.

First reports of new activity in Seminole County: J. Ligon No. 1 Jones, SE SW SE Section 24-8-7, location; Sunray Oil Co. No. 2 Key, SW NW SE Section 12-6-5, location; Mason No. 1-A well, SE SW NE Section 33-7-6, cellar and pits; McQueen No. 2 McCann, SE SE NE Section 33-7-6, location; Cities Service Oil Co. No. 5-B Fish, NW SW SE Section 19-7-8, rig.

Pontotoc County

Patsy Oil Co. completed a 2,404-bbl. well in the Fitts field, Pontotoc County, at No. 3 Bates, SW NW SW Section 26-2n-7. Production was from Hunton lime topped at 3,932 ft., total depth 4,032 ft. It was treated with 6,000 gal. of acid.

Simpson-Roodhouse No. 1 Statler, NE SW SW Section 34-2n-7, topped Gilcrease sand at 1,824 ft., total depth 1,848 ft., was shot and completed for 40 bbl. of oil daily.

Casey & Harden No. 1 Norman-Fleming, NE NE NE Section 15-5-4, Bebee pool, was acidized with 6,000 gal. and pumped 35 bbl. of oil daily from Viola lime at 2,514 ft., total depth 2,581 ft.

F. W. Cooper No. 1-A McKinley, NW NE NW Section 23-2n-7, was drilling at 136 ft.

Okfuskee County

Shell Oil Co. No. 6 Replogle-A, SW NW NE Section 11-11-8, Dill pool, Okfuskee County, had Cromwell sand at 3,370-90 ft., total depth, had frozen pipe and an unsuccessful swedging job and was abandoned.

Carter Oil Co. No. 2 King, C SE SW Section 2-11-8, an old well, was deepened from 3,919 ft. to 3,974 ft., and was recompleted for 242 bbl. of oil daily.

Lease Investment Co. No. 1-A Parsona, NE NW NE Section 28-13-10, topped Dutcher sand at 2,865 ft., total depth 2,890 ft., and pumped 86 bbl. of oil daily.

Okmulgee County

Moffett Brothers No. 1-A Bostable, NE SE NW Section 16-11-12, Summers area, Okmulgee County, was bottomed at 1,320 ft., and produced 500,000 cu. ft. of gas daily.

M. E. Craig No. 7 Cover, C SW NE Section 25-14-14, Bald Hill area, had Booch sand at 1,091 ft., total depth 1,132 ft., was shot and pumped 8 bbl. of oil in 24 hours. Eli Edwards No. 3-B Tabor, C NW NE Section 33-15-14, pumped 6 bbls. of oil daily at 814 ft., total depth. Francis Corp. No. 3-A Lamons, NW NW NW Section 33-15-14, pumped 5 bbl. of oil daily from Red Fork sand topped at 1,489 ft., total depth 1,544 ft.

E. M. Jordan No. 1-A Walker, C N½ S½ NE Section 1-13-11, had spudded, and same operator's No. 1 Jordan, NW cor. Section 11-14-12, had rig on ground.

Lincoln County

Wilcox Oil & Gas Co. No. 26 Sac and Fox, NW NW NW Section 22-14-6, Sac and Fox pool, Lincoln County, topped Prue sand at 2,997 ft., total depth 3,082 ft., was shot and pumped 25 bbls. of oil daily.

Jones Associated Oil Co. completed a 25-bbl. oil well at No. 4 May, NE SE SE Section 10-14-6. It topped Prue sand at 2,906 ft., total depth 2,994 ft., and was shot.

Payne-Pawnee-Osage Counties

T. N. Berry and others No. 1 Whitely, NW SW SE Section 18-18-2e, Ramsey pool, Payne County, had first Wilcox sand at 4,956 ft., and was dry and abandoned at 4,973 ft., total depth.

S. Brewer and others No. 1 Spess, NE SE NW Section 27-20-9, Keystone area, Pawnee County, had Red Fork sand at 2,003 ft., total depth 2,048 ft., and pumped 27 bbls. of oil daily.

Texas Co. No. 1 L. M. Graham, C W½ SW SW Section 12-17-1e, Coyle pool, Payne County, and same operator's No. 1 J. S. Graham, C E½ NE SE Section 11-17-1e, were near completions, flowing 66 bbl. and 132 bbl. of oil, respectively, in 24 hours.

Norbla Oil Co. and Peters Petroleum Co. No. 5 Osage, NE SE SW Section 30-22-9, Osage County, pumped 4 bbl. of oil daily from Buzzard sand at 536-56 ft., total depth 557 ft.

Sinclair Prairie Oil Co. No. 67 Osage, C S½ NW SE Section 12-21-8, Osage City area, had sand at 613-19 ft., total depth, and pumped 10 bbl. of oil and 48 bbl. of water daily.

Same company's No. S-10 Osage, NE SW NW Section 22-25-6, South Burbank area, was completed for 25 bbl. of oil daily at 2,777 ft., total depth.

Snyder Drilling Co. No. 3 Osage, SW SW SE Section 13-26-4, was a location.

Oklahoma County

In Oklahoma County, Sinclair Prairie Oil Co. No. 8 Stomper, NW SW NW Section 30-11-2w, Oklahoma City field, found pay in lower Hoover sand at 4,069 ft.,

total depth 4,085 ft., and was completed for 68 bbl. of oil daily.

Creek-Tulsa-Muskogee

W. M. Dunn No. 1 Anthis, NW SE SE Section 34-14-10, East Tuskegee area, Creek County, topped Misener sand at 3,187 ft., total depth 3,188 ft., and had initial daily production of 460 bbl. of oil.

Bryan Petroleum Co. No. 3 Mathews, CSL SW NE Section 19-15-15, Muskogee County, had Dutcher sand at 1,501 ft., total depth 2,173 ft., plugged back to 1,530 ft. and pumped 5 bbl. of oil daily.

C. Williams and others No. 1 Craker, NE NW SE Section 27-17-9, Creek County, was dry and abandoned at 3,336 ft., total depth.

E. E. Shamblin and others No. 1 Taylor, SW SE NW Section 18-17-11, Kellyville district, Creek County, produced 3,000,000 cu. ft. of gas from Taneha sand and was completed at 2,261 ft., total depth. Rock pressure was 725 lb.

L. B. Jackson No. 2 Stanley, SW NW SE Section 33-18-10, Creek County, was dry and abandoned at 2,707 ft.

A. Pepis No. 4-A Lee, SE NW SW SE Section 12-18-11, Sapulpa district, was completed for 8 bbl. of oil daily at 1,664 ft., total depth.

Turnbow and others No. 1 Coonrod, NE SE SE Section 3-19-9, Mannford area, Creek County, pumped 5 bbl. of oil daily after a shot from Skinner sand found at 1,937 ft., total depth 2,016 ft.

Cummings Brothers No. 1 fee, NW NW NW Section 28-17-13, Tulsa County, was bottomed at 2,053 ft., plugged back to 1,440 ft., and produced 300,000 cu. ft. of gas daily.

R. Kimble No. 1 Ernest, NW NW SE Section 9-19-10, Keystone area, Tulsa County, was dry and abandoned at 2,095 ft., total depth.

McAdams & Thornton No. 1-A McLoud, NE NW SW Section 31-17-10, near Hepburn in the Kellyville district, Creek County, flowed 90 bbls. of oil in 4 hours and made daily potential of 554 bbl. It found Dutcher sand at 2,693 ft., total depth 2,713 ft.

Martin and others No. 3 Darks, NE SW NE Section 28-14-10, Creek County, had dug cellar and pits.

Southern-Southwestern

Ed Shell (Galbreath) No. 1 Wolf, C SE SW Section 8-1n-2e, an old well in Murray County, was plugged back from 2,522 ft. to 2,275 ft. and recompleted for 10 bbl. of oil daily.

Raizen Brothers No. 2-A Carter, NW NW NE Section 16-4s-3w, Healdton field, Carter County, had sand at 1,339-51 ft., total depth 1,352 ft., and pumped 24 bbl. of oil daily.

Ohio Oil Co. No. 3 Beyley, NE SE NE Section 10-5-9w, Cement field, Caddo County, had sand at 3,446-77 ft., broken sand at 3,579-84 ft., total depth, and casing was perforated at 3,443-53 ft. and 3,455-66 ft. It flowed 702 bbl. of oil in 4 hours and made potential of 4,212 bbl.

Phillips Petroleum Co. No. 2 Garrison, SE SE NE Section 34-6-10w, Cement field, found sand at 3,350-54 ft. and 3,401-12 ft., total depth, and flowed 275 bbl. of oil in 4 hours.

R. H. Fox No. 1 Southall, NE NW SW Section 2-1n-20w, Altus pool, Jackson County, had granite wash at 1,465-80 ft., total depth 1,592 ft., and pumped 14 bbl. of oil daily.

O. P. Burnham No. 2 Gaines, SE SW NW Section 10-1n-20w, pumped 60 bbl. of oil daily and was completed in granite wash at 1,417-21 ft., totil depth.

New operations: Carter and others No. 17 Arm, SE SE NE Section 26-1s-5w, Stephens County, spudded; George L. Pace No. 1 Bush, NE SE NW Section 3-2s-8w, was a rig; C. W. Tomlinson No. 2 Montgomery, NW NW SE Section 11-2s-8w, an old Stephens County well being deepened, drilling below 2,058 ft.; Jones Brothers No. 8 Carter, SW NW NE Section 16-4s-3w, Carter County, drilling below 295 ft.; Hal Vaughn No. 4 Stoken, SE SE SW Section 14-1n-20w, Jackson County, pits; Wichita Oils, Inc., No. 13 Noble, SE NW NW Section 28-2n-10w, Comanche County, location; T. H. McCasland No. 3-A Horton, SW NW SE Section 8-3-5w, Grady County, pits.

Forest City Basin Activity

(Continued from Page 75)

Co., Oklahoma drillers, have the contract to drill to Arbuckle lime, unless profitable production is found above that level. A No. 2 National rig is being used. Major oil companies are contributing to the test, notably Sinclair Prairie Oil Co., Phillips Petroleum Co. and Deep Rock Oil Corp. Others interested indirectly, through lease holdings or otherwise, include Carter Oil Co., Magnolia Petroleum Co., Indian Territory Illuminating Oil Co. and others. Location is on a structure mapped by the United States Geological Survey and supported by the Missouri Geological Survey in 1917. Recently it was mapped by John W. Merritt, Tulsa consulting geologist.

A well was drilled on the Smithville structure in 1927 in SE NE Section 19-53-33, but lack of adequate pipe and insufficient funds caused abandonment before completion. It was drilled to top of Mississippi lime and bottomed at 924 ft. Twenty-two feet of sand was reported in that early test, with high-gravity oil showing through a hole full of water.

Brin & Nathan of Wichita were preparing to start drilling at No. 1 Decker, C NW NW Section 1-61-38w, Holt County. Road to the location was being constructed and tools were due to be moved in early this week. The operators will drill the well with cable tools. It is to be drilled to Arbuckle lime, expected around 2,600 ft. Magnetometer and electrical surveys indicate a sharply defined structure under the 3,500-acre block held by Brin & Nathan.

Work was expected to start by June 20 on the first test to be drilled in the Atchison County, Kansas, sector of the basin. It will be drilled on a 5,000-acre block controlled by Byram-Jackson-Blair Oil Corp. of Atchison. Location is in NW NE Section 17-6-20e, about 5 miles southwest of Atchison. Earl F. Wakefield, Wichita operator and drilling contractor, has the contract.

Operations were at routine stages in other active Missouri tests in the basin, several of the wildcats being delayed by mechanical troubles and for other reasons. Several new tests were expected to be started and new locations announced within the next week or so.

In southeastern Missouri, Coastal Petroleum Co. had started drilling No. 1 Bryant-Pearson, NW Section 27-22-6, Butler County. It is to be a 3,500-ft. test.

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Michigan Field Report

By
O. C. PRESSPRICH

New Wells Add 13,500 Bbl. to Daily Potential of State

SAGINAW, Mich., May 29.—New developments in the Salem, Columbia and Walker township oil fields this past week, coupled with the usual success attending Clare County wells, practically forced the Bloomingdale area out of the Michigan picture. Activity remained at the new high level and the ratio of commercial completions to dry holes was well above average as new wells contributed a 13,500-bbl. increase to the state's daily potential production.

Unusual success attended expanded development in the Salem field of Allegan County, where seven out of eight completions brought oil in commercial quantities for a total of 3,120 bbl. For the whole state there was a total of 35 completions—18 oil wells, 14 dry holes, 1 gas well and 2 abandoned locations.

Concentration of activity moved out of Van Buren County's Bloomingdale Township into neighboring Columbia Township, where six new wells had total production of 2,830 bbl. a day. Six other tests were given up as dry holes. By contrast there was but one completion, that a dry hole in Bloomingdale, which for months had consistently led other fields. Possibilities of the Kent County area were advanced considerably as the week's record in Walker Township stood at three oil wells out of four completions.

Biggest new well of the week was Talbot Oil Co. No. A-2 State in Section 28, Redding Township, Clare County, with natural flow gaged at 1,800 bbl. a day. Less productive by only 300 bbl. was Charles W. Teater No. 7 Van Horn in Section 3 of Clare's Freeman Township. American Production Co. owns the new gas well, which was developed in Section 36 of Clare's Grant Township.

Production of the new Salem wells ranged from 150 to 800 bbl. a day, Daily Crude Oil Co. getting the biggest in Section 2. Socony-Vacuum Oil Co. in Section 11, and Muskegon Development Co., in the same section, each completed wells rated at 600 bbl. a day.

Kent County progress spurred new development as Wolverine Natural Gas Co. completed two wells, one extra good, in Walker Township, both in Section 5. Its No. 2 Rex Johnson, completed at 1,782 ft., attained natural flow of 1,500 bbl. a day, while No. 1 Johnson was rated at 500 bbl. daily after receiving acid treatment. Smith Petroleum Co., developing Section 32, acidized its latest completion to get 250 bbl. a day.

Columbia field completed producers ranged in value from a 30-bbl. well in Section 11 to one doing 1,500 bbl. in Section 13. In Section 12 there were five completions, including three commercial wells.

Among the dry holes abandoned were exploratory developments in Dorr and Overisel townships of Allegan County, another in Ottawa County's Allendale field and one in Adams Township of Arenac County, abandoned temporarily. Two efforts to extend southwestern Michigan's activity failed with abandonment of two tests in Covert Township of Van Buren County at depths of 1,032 and 1,104 ft.

New permits issued by the state Conservation Department for the past week totaled 25 in nine counties, five being for new developments in Walker Township, an equal number for new wells in Columbia. Three were listed for Salem and among others were authorizations for explorations in Lee and Watson townships, Allegan County; North Porter in Cass County; Billings in Gladwin County; Clyde in St. Clair County and Colon in St. Joseph County.

The state Public Service Commission formally approved plans of Northern Pipe Line Co. for a 45-mile gas line from Arenac County to Midland. The order makes the Arenac gas pool, with an estimated potential reserve of better than 2,000,000,000 cu. ft. available for the Saginaw and Bay City areas, using natural gas supplied by Consumers Power Co. facilities.

Following is a summary of the past week's Michigan completions:

Allegan County

Dorr Township (4n-12w)—Dry after 1,794 ft. of drilling, D. C. Slusser and F. W. Kurtz, trustees, abandoned No. 1 Henry Rozema, NE SW NE Section 4. It was a wildcat.

Overisel Township (4n-14w)—Michigan Devonian Petroleum Co. abandoned location for No. 1 Benjamin Winkles, NW SE NE Section 22.

Salem Township (4n-13w)—The Salem pool attracted renewed interest of oil men as a result of the past week's showing. Seven of the eight completions were commercial oil wells, four being especially good in that area of shallow wells. Daily Crude Oil Co. No. 1 M. Steffes, SW SW SE Section 2, topped the list, producing at an 800-bbl. a day rate after being acidized on completion at a depth of 1,634 ft. The only failure was Victor Wilson's No. 1 M. S. Lowe, SE SE NW Section 5, abandoned as dry at a depth of 1,648 ft. Section 11 was the scene of three new wells. Socony-Vacuum Oil Co. completed No. 3 Charles Weber, NE NE NW, at 1,593 ft. and after acidizing the production was 600 bbl. daily, a volume equaled by Muskegon Development Co. with its No. 1 Homrich, NW SE NE, completed at a depth of 1,603 ft., and then acidized. The third producer in that section was Duham & Jones No. 1 John Schoendorf, NW NE SE, completed at 1,599 ft. and producing 150 bbl. daily, after getting acid treatment. The Red-Man Oil Co. No. 1 fee, NW NE NE Section 22, also was good for 600 bbl. It was acidized at 1,580 ft. Acidized at the same completion depth, production rated 200 bbl. a day for the Petroleum Enterprises No. 2 Dean, SW NE NE Section 22. Black Rock Oil Co. got after-acid production of 170 bbl. daily from No. 1 Kipen, NW NE NW Section 23.

Clare County

Freeman Township (18n-6w)—C. W. Teater completed another excellent producer in the Freeman-Redding pool, getting production at 1,500 bbl. daily from No. 7 Van Horn, NE SW NE Section 3.

Grant Township (17n-4w)—American Production Co. got a 7,000,000-cu. ft. gas producer in C N½ S½ N½ Section 36, completing No. 1 Elmer R. Bruckart at 1,282 ft.

Redding Township (19n-6w)—Biggest new producer of the week was the Talbot Oil Co. No. A-2 State, N½ SE SW Section 28, rated naturally at 1,800 bbl. a day.

Kent County

Walker Township (6n-12w)—In proved territory in the state's newest oil pool, Wolverine Natural Gas Co. got two oil completions, one being extra good. No. 1 Rex Johnson, NW NW NE Section 5, was acidized to bring daily output to 500 bbls. at completion depth of 1,786 ft., but No. 2 Johnson, NE NW NE Section 5, promised to be three times as valuable. Its natural flow was 1,500 bbl. a day, completion depth 1,782 ft.

Walker Township (7n-12w)—Smith Petroleum Co. completed the No. 1 Zeeff, SE SE SE Section 32, at 1,794 ft. After being acidized production daily was 250 bbl.

Wyoming Township (6n-12w)—R. A. T. Wright abandoned as a dry hole at 1,885 ft. No. 1 Anne R. Heald, SE SW SE Section 5.

Van Buren County

Bangor Township (2s-16w)—Bridger Basin Oil Co. Abandoned as dry at 1,004 ft. No. 1 Oscar Uirath, NW NE NW Section 28.

Bloomingdale Township (1s-14w)—Bloomingdale had a poor week. The William P. Shoemaker No. 1 Warren W. Goble, SW SW SE Section 7, was abandoned as dry at 1,333 ft. W. H. Thurlby abandoned location for No. 2 A. J. Smith, NW SW NE Section 24.

Columbia Township (1s-15w)—Producers and dry holes were equal in number as the Columbia field recorded 12 completions to continue in first place in the state, so far as activity is concerned, a 1,500-bbl. well giving impetus to the development there. Joe R. Van Arman abandoned No. 1 Margaret Willerton, SE SE SE Section 10, which remained at 1,275 ft. Good for only 30 bbl. a day after getting acid treatment, No. 1 Corliss H. Strong, NE NE NE Section 11, was completed at 1,184 ft. It is a Michigan Cities Gas Co. development. Lockwood, Lowry & Hook got 700 bbl. a day from No. 1 Roy Henry, NW SW NW Section 12, completed at 1,171 ft. and then acidized. E. E. McKean abandoned as dry No. 1 Charles S. Lake, SE NE SE Section 12, at a depth of 1,263 ft. W. E. Dotson No. 1 Roy Stockton, NW SW NE, produced 75 bbl. a day after being acidized at 1,181 ft. Fischer & McCall No. 1 J. Moorehead, SW NW NE Section 12, was acidized to 400 bbl. a day, completion depth being 1,203 ft. J. H. Fitchett and associates abandoned at 1,185 ft. No. 1 Fox Heirs, SW SE NW Section 12. C. C. Goff and others completed No. 1 Herman Barker, SW NW NE Section 13, at 1,203 ft. and got a natural yield of 1,500 bbl. daily. In nearby SW SW SE Section 13, No. 1 H. & R. Cooley, drilled by Albert E. Kopprasch, trustee, was a dry hole, abandoned at 1,239 ft. Also dry and abandoned were the Clapsaddle & Harris No. 1 Nona Wilmason, SE SW SE Section 13, at 1,216 ft., and the J. B. Reed No. 2 H. & R. Cooley, NE SE SE Section 14, at 1,255 ft. Clapsaddle, Harris & Fulton completed No. 1 Charles Pepper, NE NE NE Section 23, at 1,217 ft., the well producing 125 bbl. a day after being acidized.

Covert Township (2s-17w)—Extension efforts failed as two Covert Township developments were abandoned as dry. They were J. S. Slagle No. 1 C. S. Wacker, N½ N½ NW Section 24, and the Coloma Development Co. No. 1 John Sanders, SE SW SE Section 28, the former at 1,032 ft., the latter at 1,104 ft.

Ottawa County

Allendale Township (7n-14w)—An exploratory test was abandoned by Century Oil & Gas Co. when No. 1 Miller, NE NE SE Section 14, showed no promise after being drilled for 2,025 ft.

Arenac County

Adams Township (19n-3e)—L. Harold Crandall, Trustee, temporarily abandoned No. 2 Dubey, SE NW SW Section 25.

Eastern Fields

(Continued from Page 60)

trict, with O. Taylor having the mineral rights. In Murphy district, Wimer Lamp has a location on the G. C. Lemon and others farm, elevation 675 ft. Pittsburgh Oil & Gas Co. will drill No. 12 A. Wince, same district, elevation 894 ft.

In Wayne County, the United Fuel Gas Co. will drill No. 4848 Minerva J. Frey, in Stonewall district, elevation 950 ft. In Union district, Libby-Owens gas department will drill on the Virgin Belcher and others farm, elevation 820 ft. This company is moving in on the E. T. Ross farm, same district.

In Wetzel County, the Manufacturers Light & Heat Co. is hauling in tools to the Frank J. Estep and others farm, on Linn Camp Run, in Proctor district, elevation 1,374 ft.

North Louisiana, Arkansas

By GEORGE WEBER

3 Good Wells Start Work in Magnolia Field in Arkansas

SHREVEPORT, La., May 29.—Interest continued this week in a number of wildcat and deep tests drilling in the tristate area, several of which are "tight" or mystery wells. Field activity is expected to increase shortly in the Magnolia field of Columbia County, Arkansas, where three wells averaging 690 bbl. per well were completed last week, and also in Cotton Valley, Louisiana, where the southeast section of the field will see further development.

The Cross Lake, or Shreveport, field showed disappointing results on the east side in the past week with salt water in two wells, but interest was directed to the northwest section of the field where an outpost, J. P. Driscoll No. 1 Woolworth, is shut down at 5,607 ft. waiting for casing. A small section of saturated lime is reported cored, but operators did not recover the last core and definite information will await production tests.

Two tests on the east and northeast flank of the field, Harry Hanbury No. 1 De Soto and Red Iron Drilling Co. No. 1 Model Gardens Unit, a northeast edge test, tested salt water. The first well, taken over from W. R. Nicholson after abandonment several weeks ago, was again abandoned after it was plugged back and redrilled into the Pettit lime. The second test is in a good producing section of the field but is believed to have been carried too far into the porous zone before testing. It is drilling ahead. Drilling activity in the field is on the decline at present.

The Bisteneau field of Bienville Parish added another 4,000,000 cu. ft. gas well with completion of the Union Producing Co. No. 1 School Board. The new producer is in the Pettit lime at 5,125-5,215 ft. Three other tests are active in the field, among them Arkansas Louisiana Gas Co. No. 1 Gayoso Unit. This deep test bottomed at 8,319 ft., set casing and perforated in the deep horizon. A blow of gas and salt water is reported to have resulted from the first production test.

Another gas-distillate area in North Louisiana becomes active with the staking of the Hunt Oil Co. No. 1 T. A. Loe, in Section 2-16-6, about a mile due east of the present production in the Bear Creek field of Bienville Parish. Hunt recently acquired properties in Bear Creek, and a pipe line is being completed for moving gas from Bear Creek to the Arkansas Fuel Oil Co.'s natural gasoline plant near Ruston.

East Border Texas

Two wells continued in the spotlight in the eastern border counties of Texas. In southeastern Panola County, Paul Pewitt No. 1 Rushing Estate is perforating in the Glen Rose section, which produces gas and distillate, about 5 miles to the south in the Joaquin field of Shelby County. Information is being withheld on this well. It is reported that the first perforations showed salt water and operators are believed to be plugging back to perforate higher in search of oil saturation. In the Joaquin field, the Earl McDaniel No. 1 McDaniel is also being shot in the lower Glen Rose horizon in hopes of being completed as an oiler or a gas-distillate well.

Panola County's blowout of last week, Turner & Smith No. 1 J. Bird, set 7-in. casing at 4,985 ft. and will make a production test shortly. In Harrison County, following completion of a Pettit gas-distillate producer recently, the Arkansas Louisiana Gas Co. will start a well, also in the Waskom field, ¾ mile southwest of No. 1 Abney which last year blew out on discovering gas distillate in the Hill sand.

Production by Pools

Estimated daily gross production all companies week ending May 26:

NORTH LOUISIANA

	Barrels
Bellevue	670
Caddo light	4,700
Caddo heavy	2,550
Converse	480
Cotton Valley heavy	75
Cotton Valley light	*13,190
Cross Lake (Shreveport)	8,015
De Soto and Red River	1,100
Elm Grove	240
Haynesville	2,675
Holly	90
Homer	2,690
Lisbon	1,850
Pleasant Hill	100
Rodessa	26,815
Sarepta-Carterville	†540
Sligo	1,290
Sugar Creek	255
Urania	2,785
Zwolle	2,750
Total	72,860

SOUTH ARKANSAS

Atlanta	400
Buckner	1,605
Champagnolle	1,565
El Dorado	1,690
Lisbon	250
Magnolia	6,405
Miller County	330
Nevada	630
Rodessa	4,285
Schuler	18,095
Smackover light	1,900
Smackover heavy	14,700
Stamps	50
Stephens	525
Troy	950
Urbana	1,130
Village	590
Total	55,100

Texas side of Rodessa field 29,035 bbl. daily.

*4,775 bbl. is distillate.
†230 bbl. is distillate.

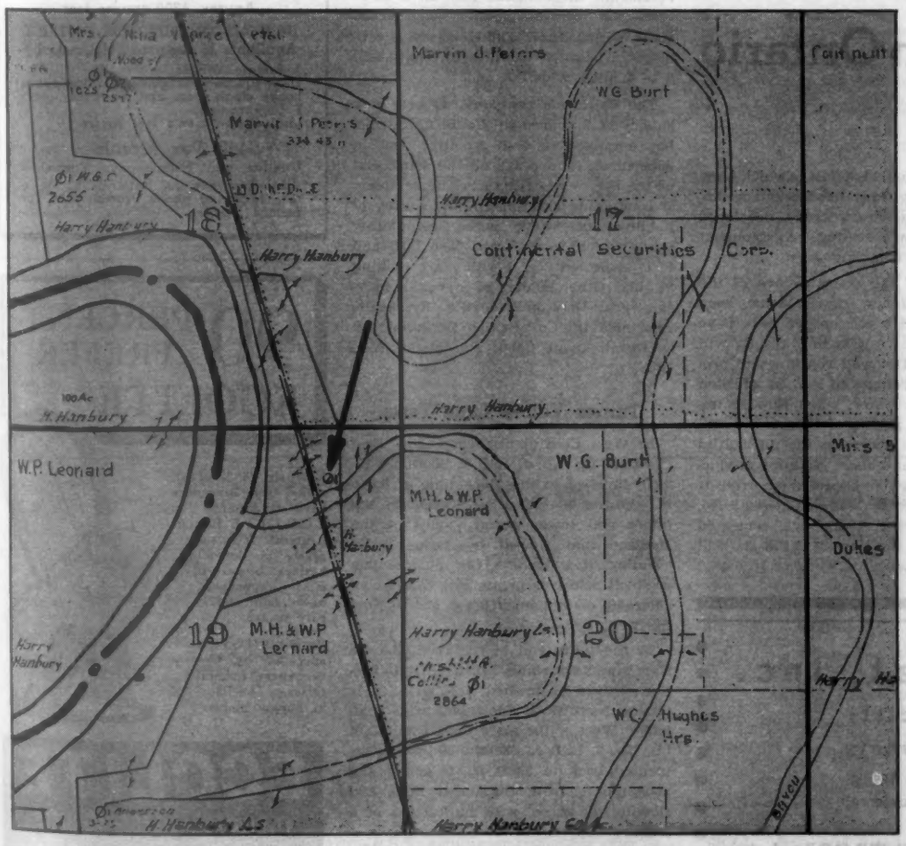
Cotton Valley

The Ohio Oil Co. completed No. 5 Bodcaw, Account 4, for a good Bodcaw sand producer. After killing the well late last year it remained shut down until it was redrilled into the sand last week. Stanolind Oil & Gas Co. staked two locations on its Pardee lease in the southeast section of the field where Midstate Oil Corp. recently completed a good Bodcaw oil well. Drilling of these wells is expected to get under way shortly and the company may also begin its deep lower Marine test in the Pine Island field of Caddo Parish in a few days. The latter test is anticipated with considerable interest in this section, as it is expected to open up lower Marine production similar to that in Cotton Valley.

South Arkansas

G. H. Vaughn has staked five new locations in the Magnolia field, and other operators are increasing drilling activity in the field to place it first among the active spots in the tristate district. The twenty-fourth producer, Shell Oil Co., Inc., No. 1 Garrett was completed this week and several other wells are slated for early completion.

South Arkansas wildcats are not showing such good results. Phillips Petroleum Co. No. 1 Askew Unit, a



Harry Hanbury No. 1 Leonard, a Bossier Parish wildcat 6½ miles northeast of the Shreveport field, is approaching the Pettit zone

wildcat drilling in Columbia County, northwest of the town of Magnolia, is below 8,440 ft. with no showing reported. In Union County, the Oliphant Oil Co. No. 1 Union Sawmill Co. near Junction City, cored the Reynolds lime, top oolitic member of the Smackover lime, and had cored to 7,950 ft. with no oil indications. A Schlumberger survey is being run.

The Stamps area of Lafayette County continues to attract attention, with the completion this week of the second producer and the staking of three locations.

NORTH LOUISIANA COMPLETIONS

Bisteneau—Bienville Parish

Union Producing Co. No. 1 Bienville School Board, 1,056 ft. S, 875 ft. W of NE cor. Section 16-16-10, initial production 4,000,000 cu. ft. of gas; perforations at 5,125-5,215 ft.; casing pressure 2,100 lb.; tubing pressure 2,000 lb.; shut in to acidize.

Shreveport—Caddo Parish

Harry Hanbury No. 1 De Soto Corp., NW cor. Section 26-18-14, salt water, abandoned; old total depth 5,563 ft.

Vivian—Caddo Parish

W. F. Bridewell and others No. 1 Huckaby Estate, C SW SW NW Section 19-22-15, dry and abandoned at 2,811 ft. F. W. Martin Drilling Co. No. 7 Bailey, 1,114 ft. W, 475 ft. N of SE cor. frac. Section 29-22-16, dry and abandoned at 2,790 ft.

Cotton Valley—Webster Parish

Ohio Oil Co. No. 5 Bodcaw, Account 4, 760 ft. S, 600 ft. E of C Section 13-21-10, 568 bbl. per day of distillate through ⅝-in. choke; casing pressure 2,400 lb.; tubing pressure 2,600 lb.; total depth 8,357 ft.; 7-in. casing set at 8,292 ft.

ARKANSAS

Magnolia—Columbia County

Hassie Hunt No. 1 Talley, 740 ft. S, 660 ft. E of NW cor. NE SW Section 14-17-20, 39 bbl. per hour through ¼-in. choke, total depth 7,587 ft. Shell Oil Co., Inc., No. 1 L. Garrett, C NW SE Section 13-17-20, 420 bbl. per day through ¼-in. choke, total depth 7,667 ft. Shell Oil Co., Inc., No. 2 Glasgow, C SW NW Section 23-17-20, 30 bbl. per hour through ⅛-in. choke, total depth 7,708 ft.

Stamps—Lafayette County

East Texas Refining Co. and Erwin & Leach No. 1 J. Bell Estate, 981 ft. S, 609 ft. E of NW cor. Section 19-16-23, 50 bbl. per day through ¼-in. choke, total depth 3,477 ft.

Schuler—Union County

Lion Oil Refining Co. No. 2 F. N. Bank, 330 ft. S, 660 ft. E of NW cor., NE¼ Section 13-18-18, 50 bbl. per hour through ⅛-in. choke, perforated casing 7,600-20 ft., total depth 7,695 ft.

East Texas Fields

(Continued from Page 76)

78 ft., 12 bbl. Cities Service Oil No. 10 E. Muckleroy, 3,536-3,602 ft., 52 bbl. Stodel Oil No. 10 D. Smith, 3,570-72 ft., 40 bbl.

Gregg County—Longview Area

Cox & Hammon No. 18 L. A. Rodden, 3,601-10 ft., 60 bbl. Stanolind Oil & Gas Co. No. 19 Key, 3,556-3,655 ft., 37 bbl.

Smith County—Joiner Area

Hunt Oil Co. No. 22-B Fair, 3,680-83 ft., 98 bbl.

EAST CENTRAL TEXAS COMPLETIONS

Franklin County

Magnolia Petroleum Co. No. 12 O. S. Maxton, 4,265-85 ft., 213 bbl. Nathan Pipe & Supply No. 3 L. Strickland, 4,292-4,314 ft., 174 bbl.

Anderson County

Carter-Gragg Oil No. 1 McGaughey, 5,317-22 ft., 79 bbl.

Henderson County

L. T. Davis No. 2 Tarkington, dry and abandoned at 3,028 ft.

Hill County

C. E. Sykes & Brennal No. 1 Weatherby, dry and abandoned at 2,557 ft.

Houston County

Humble Oil & Refining Co. No. 1 N. H. Rhea, 5,781-5,901 ft., 4,390,000 cu. ft. of gas.

Kaufman County

Valentine & DeArman No. 1 Bowman, dry and abandoned at 3,020 ft.

Leon County

J. K. Hughes No. 1 Pearlstone, dry and abandoned at 5,566 ft.

Navarro County

W. W. Strong No. 1 Estes Bros., dry and abandoned at 1,355 ft.

Smith County

Dr. T. T. Grant No. 1 T. W. Thweatt, dry and abandoned at 4,508 ft.

Titus County

Humble Oil & Refining Co. No. 4 C. W. Graft, 4,304-14 ft., 319 bbl.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., May 27.—Effective May 23, the Alberta Petroleum and Natural Gas Conservation Board increased the daily aggregate allowable of the 72 Turner Valley crude wells from 22,500 to 25,000 bbl. The largest well under the new schedule is Royalite Oil Co. No. 38, LSD 16, Section 8-18-2w5, with 835 bbl. a day. A previous increase on May 16 brought the allowable up from 19,500 to 22,500 bbl. The present figure of 25,000 bbl. a day is the highest since last fall, when, at the peak of harvesting operations, an aggregate of 28,000 bbl. was allowed, gradually reduced to 10,000 bbl. in January of this year.

Steveville Field

In the Steveville field, 130 miles east of Calgary, Anglo-Canadian Oil Co. No. 2, LSD 4, Section 14-20-11w4, which blew in with a large gas production accompanied by some heavy crude, developed salt water while testing. A statement issued by the company says:

"Officials of the company are of the opinion that a new structure has been opened up and when proper tests have been made that satisfactory results will be obtained. The well continues to produce a large volume of gas, in addition to the oil and water, when flowing under high back pressure. Efforts are still being made to overcome the difficulties encountered, and more definite production data may be expected shortly. It is also expected that Anglo-Canadian No. 1, LSD 2, Section 13-21-12w4, cemented in the top of the lime at 3,178 ft., will be completed within a week or 10 days."

Anglo-Canadian No. 2 in preliminary tests developed a measured flow of 11,000,000 cu. ft. a day, and at times built up a pressure as high as 1,400 lb. The crude was 21 gravity with 19,040 B.t.u., making it suitable for marine and fuel oil use; and was reported sweet, with no signs of sulfur. The test was jointly drilled by Anglo-Canadian Oil Co. and Petroleum Investments, Ltd. on a 55-45 basis, the operators holding some 65,000 acres on structure. The structure is estimated a possible 70 miles in length and 3 to 4 miles wide.

The California company, Alberta subsidiary of Standard Oil Co. of California, has arranged to drill its first well in Alberta on its acreage on the south end of the Steveville structure. The company is conducting a seismographic survey of holdings of 80,000 acres, completing work which was started last fall; and it is expected No. 1 will start drilling in July. Other holders of Steveville acreage are Dawson-Steveville Syndicate, Anaconda Oil Co., British Dominion Oil & Development Corp. and Model Oils, Ltd.

Turner Valley Lime Tests

In West Central Turner Valley, East Crest Oil Co. No. 4, LSD 8, Section 6-19-2w5, finished in the black lime at 8,040 ft., showed 204 ft. of saturation in the upper and lower porous zones of the Madison and flowed by heads while cleaning. It is being given a succession of small acid treatments and shows considerable oil but insufficient gas to flow the well.

In the south end of the field, George Harris and associates No. 1, LSD 13, Section 9-18-2w5, finished at 7,454 ft., is testing for official allowable, after acidizing. West of the main field, Okalta Oil Co. No. 6, LSD 3, Section 30-18-2w5, cemented back to 9,994 ft., is continuing swabbing tests of the upper lime, and flowing by heads, with indications of a small producer.

In Section 16-18-2w5, Okalta No. 8, LSD 6, is below 6,793 ft. after getting the Madison limestone at 6,650 ft.

In Section 20-18-2w5, York Oils No. 2, LSD 6, is below 7,845 ft., more than 276 ft. in the limestone, and will likely be the next completion.

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S. T. R.	Depth	Status—
Cole, F. E., No. 1 Ferini, Santa Maria Valley, S. B.	15-10-35	4,360	sd. sh. drlg.
Union Oil, No. 5 Vicente, Santa Maria Valley, S. B.	21-10-34	2,540	sd. sh. drlg.
Petrol Corp., No. 32-A Tognazzini, Gato Ridge, S. B.	9- 8-32	3,100	O.S. drlg.
Arnold, E. C., No. 2 Careaga, Los Alamos, Santa Barb.	8- 8-33	6,851	cmtd. fish
Field, O. C., No. 1 White, Cat Canyon, Santa Barbara	21- 9-33	5,960	hd. sh. drlg.
United West. Oil, No. 1 Los Olivos, Santa Barbara	16- 7-30	3,841	sd. sh. drlg.
Richfield Oil, No. 1 San Marcos, Sisquoc, Santa Barb.	20- 6-29	1,961	sd. sh. drlg.
General Pet., No. 4 More, Goleta, Santa Barbara	15- 4-28	3,598	sd. sh. drlg.
Ivers, H. A., No. 14 Kentuck, Sespe, Ventura	1- 4-20	1,400	pump 50 b.d.
Section 20 Oil, No. 21, Sespe, Ventura	20- 5-19	2,862	sd. sh. drlg.
English, J. A., No. 1 Lankershim, Hopper Can., Vent.	13- 4-19	1,430	sd. sh. drlg.
Levesque, G. M., No. 1 Robertson, Simi, Ventura	17- 2-18	1,798	gr. sh. drlg.
Galveston Oil, No. 1 Basola, Bardsdale, Ventura	5- 3-19	3,150	sd. sh. drlg.
Texas Co., No. 137 Shiells, Shiells Canyon, Ventura	4- 3-19	3,045	sd .sh. drlg.
El Rancho Oil, No. 3 Elkins, Shiells Canyon, Ventura	9- 3-19	2,935	sd. sh. drlg.
Continental Oil, No. 11 Grubb, San Miguelito, Ventura	24- 3-24	5,597	sd. sh. drlg.
C. C. M. Oil, No. 7-A Hobson, Padre Canyon, Ventura	15- 3-24	5,750	fish D.P.
C. C. M. Oil, No. 27-B Hobson, Rincon, Ventura	16- 3-24	4,917	P.B. 4,850
Tide Water A. O., No. 34 V.L.W., Ventura Ave., Vent.	24- 3-23	6,480	sd. sh. drlg.
Tide Water A. O., No. 40 V.L.W., Ventura Ave., Vent.	25- 3-23	10,250	O.S. drlg.
Tide Water A. O., No. 14 McGonigle, Vent. Ave., Vent.	23- 3-23	8,930	sd. sh. drlg.
Tide Water A. O., No. 84 Lloyd, Ventura Ave., Vent.	27- 3-23	3,882	sd. sh. drlg.
Tide Water A. O., No. 123 Lloyd, Ventura Ave., Vent.	27- 3-23	8,635	idle
Tide Water A. O., No. 124 Lloyd, Ventura Ave., Vent.	23- 3-23	8,350	sd. sh. drlg.
Tide Water A. O., No. 8 Hartman, Vent. Ave., Vent.	22- 3-23	8,650	O.S. drlg.
Shell Oil, No. 99 Taylor, Ventura Ave., Ventura	29- 3-23	6,060	sd. sh. drlg.
Shell Oil, No. 33 Edison, Ventura Ave., Ventura	28- 3-23	8,290	flow 1,075 b.d.
Brit. Amer. Oil, No. 7 Bolsa, Ventura Ave., Ventura	22- 3-23	7,940	O.S. drlg.
Lloyd Corp., No. 2 Dabney, Ventura Ave., Ventura	23- 3-23	9,813	redrlg. 9,500
Belridge Oil, No. 35-38, North Belridge, Kern	35-27-20	7,140	sd. sh. drlg.
Belridge Oil, No. 28-16, North Belridge, Kern	28-27-20	8,585	flow 420 b.d.
Belridge Oil, No. 28-25, North Belridge, Kern	28-27-20	8,500	redrlg. 6,550
Tide Water A. O., No. 21, North Belridge, Kern	21-27-20	4,691	sd. sh. drlg.
Richfield Oil, No. 3 Belridge, North Belridge, Kern	22-27-20	7,569	redrlg. 6,491
Standard Oil, No. 2 T. G. & T., Delano, Kern	2-25-23	2,430	idle
Atlas Pet., No. 1 Moore, Delano, Kern	7-25-25	3,802	dry; abd.
Dilamar Oil, No. 3 Quinn, Jasmin, Kern	15-25-27	2,902	idle
Pan-May Oil, No. 1 Kelly, Round Mountain, Kern	31-27-29	1,508	may abdn.
Berryman, F. L., No. 1 Kern, Kern River, Kern	27-28-28	466	O.S. drlg.
D. B. K. Co., No. 4 Kern, Kern River, Kern	34-28-28	382	pump 5 b.d.
Wright & Eyet, No. 1 Dome, Mount Poso, Kern	28-26-28	1,509	bailing
Crestmont Oil, No. 1 Buchner, Mount Poso, Kern	20-26-28	1,547	rig to pump
Ring Oil, No. 3 Blackfoot, Mount Poso, Kern	22-26-28	1,903	gr. sd. drlg.
Texas Co., No. 1 Jewett, Arvin, Kern	16-31-29	6,211	O.S. drlg.
Standard Oil, No. 2 Jewett, Arvin, Kern	16-31-29	4,198	sd. sh. drlg.
Universal Consd., No. 1 Derby, Arvin, Kern	15-31-29	6,173	flow 910 b.d.
Harris, S. F., No. 1 Zenith, Sivert, Kern	27-30-30	462	idle
Western Gulf Oil, No. 42-B, KCL, Fruitvale, Kern	14-29-27	2,945	P.B. 2,809
Smith, H. G., No. 1 Galtes, Fruitvale, Kern	14-29-27	2,932	idle
Pacific O. & G. Dev., No. 3 Guisti, Fruitvale, Kern	14-29-27	2,964	will deepen
Pacific Southwest Oil, No. 1 Dillon, Fruitvale, Kern	27-29-27	4,068	deepening
Standard Oil, No. 8-2-B, KCL, Wasco, Kern	17-27-24	13,135	flow 7,500 b.d.
Union Oil, No. 1-36, KCL, Shafter, Kern	36-27-24	12,985	cleaning out
Cal. Expl., No. 1 Dougherty-Salisbury, Buttonw., Kern	7-29-24	12,989	P.B. 12,814
General Pet., No. 2 Van Ness, Rio Bravo, Kern	2-29-25	10,298	sd. sh. drlg.
Union Oil, No. 8-34, KCL, Rio Bravo, Kern	34-28-25	11,290	O.S. drlg.
Superior Oil, No. 1 Moodie, Rio Bravo, Kern	26-28-25	11,550	flow 3,000 b.d.
Standard Oil, No. 2 Fleishauer, Greeley, Kern	20-29-26	11,600	P.B. 11,600
Standard Oil, No. 11-18, KCL, Greeley, Kern	18-29-26	7,790	O.S. drlg.
Standard Oil, No. 11-19, KCL, Greeley, Kern	18-29-26	4,161	sd. sh. drlg.
Standard Oil, No. 12-6, KCL, Greeley, Kern	30-29-26	11,262	gr. sh. drlg.
Continental Oil, No. 2-D, KCL, Bellvue, Kern	14-30-26	7,684	sd. sh. drlg.
Shell Oil, No. 78-24-A, KCL, Ten Section, Kern	24-30-25	7,761	sd. sh. drlg.
Shell Oil, No. 36-14-A, KCL, Canal, Kern	14-30-25	8,340	O.S. drlg.
Tide Water A. O., No. 35-E, KCL, North Canal, Kern	7-30-25	8,364	test O.S.
Ohio Oil, No. 12-E, KCL, Canal, Kern	14-30-25	7,198	sd. sh. drlg.
Richfield Oil, No. 12-33-A, KCL, Tupman, Kern	33-30-25	4,994	sd. sh. drlg.
Standard Oil, No. 21-1, KCL, Tupman, Kern	19-30-25	8,486	sd. sh. drlg.
Richfield Oil, No. 14-3-B, KCL, Coles Levee, Kern	3-31-25	7,750	sd. sh. drlg.
Tide Water A. O., No. 61, KCL, Coles Levee, Kern	14-31-25	9,750	sd. sh. drlg.
Standard Oil, No. 20-1, KCL, Coles Levee, Kern	9-31-25	9,216	O.S. drlg.
Ohio Oil, No. 2-F, KCL, Coles Levee, Kern	10-31-25	9,917	P.B. 8,650
Standard Oil, No. 218-15-D fee, Midway-Sunset, Kern	15-32-24	3,175	sd. sh. drlg.
Vista Grande Oil, No. 1 Schultz, Midway-Sunset, Kern	36-32-23	3,630	bailing
Van Fleet & Durkee, No. 3 Hoyst, Midw.-Sunset, Kern	36-32-23	2,510	will P.B.
General Pet., No. 1 B.V.A., Midway-Sunset, Kern	1-32-24	4,540	sd. sh. drlg.
Manley & McGinn, No. 15 Midway, Midw.-Sun., Kern	15-31-22	1,232	rig to pump
Par Oil & Gas, No. 1 Hager, Midway-Sunset, Kern	16-31-22	1,837	gr. sd. drlg.
West. Gulf Oil, No. 1 Panhandle, Buena V. Lake, Kern	3-32-26	4,281	sd. sh. drlg.
Gates, F. E., No. 2 Laymance, McKittrick, Kern	20-30-22	1,474	pump water
Richfield Oil, No. 1 KCL, Wheeler Ridge, Kern	28-11-20	11,001	O.S. drlg.
Continental Oil, No. 1-F, KCL, San Emidio, Kern	5-10-21	2,080	sd. sh. drlg.
Shell Oil, No. 76-31 Union, San Emidio, Kern	31-11-22	3,698	hd. sh. drlg.
Shell Oil, No. 48-30 Port Costa, Turk, Fresno	30-17-16	8,090	sd. sh. drlg.
Stuart Oil, No. 1 Hill, W. Coalinga, Fresno	12-21-14	1,410	recmtd. 1,385
Tyler & Cornwell, No. 4 Tyler, W. Coalinga, Fresno	14-20-14	280	idle
Rylatt, Harry, No. 3 Kipling, W. Coalinga, Fresno	26-20-14	1,508	sd. sh. drlg.
Bandini Pet., No. 48-18 Webb, N.E. Coalinga, Fresno	18-19-16	3,294	sd. sh. drlg.
Petseahon, No. 62-7-F, S.E. Coalinga, Fresno	7-20-16	8,020	flow 3,238 b.d.
Petseahon, No. 75-7-F, S.E. Coalinga, Fresno	7-20-16	4,576	sd. sh. drlg.
Petseahon, No. 5-18-F, S.E. Coalinga, Fresno	18-20-16	3,284	sd. sh. drlg.
Texas Co., No. 1 Exeter fee, S.E. Coalinga, Fresno	6-20-16	7,430	sd. sh. drlg.
Texas Co., No. 2 Exeter fee, S.E. Coalinga, Fresno	6-20-16	2,553	sd. sh. drlg.
Standard Oil, No. 73-13-C fee, S.E. Coalinga, Fresno	13-20-15	7,070	flow 3,111 b.d.
Superior Oil, No. 6 fee, S.E. Coalinga, Fresno	7-20-16	7,895	sd. sh. drlg.
Superior Oil, No. 2 Cagle, S.E. Coalinga, Fresno	6-20-16	7,430	hd. sh. drlg.
Superior Oil, No. 1 P.V.F., S.E. Coalinga, Fresno	22-20-15	6,098	sd. sh. drlg.
Holly Dev., No. 82-12-C, S.E. Coalinga, Fresno	12-20-15	4,994	sd. sh. drlg.
K. N. D. A., No. 54-24-H, Kettleman North, Fresno	24-21-16	10,865	testing
K. N. D. A., No. 4-18-Q, Kettleman North, Kings	18-22-18	8,196	sd. sh. drlg.
K. N. D. A., No. 2-20-Q, Kettleman North, Kings	20-22-18	7,070	sd. sh. drlg.
K. N. D. A., No. 6-22-Q, Kettleman North, Kings	22-22-18	7,925	flow 5,092 b.d.
K. N. D. A., No. 58-22-Q, Kettleman North, Kings	22-22-18	6,992	br. sh. drlg.
K. N. D. A., No. 4-26-Q, Kettleman North, Kings	26-22-18	5,680	sd. sh. drlg.
Standard Oil, No. 87-7-Q, Kettleman North, Kings	7-22-18	5,996	br. sh. drlg.
Standard Oil, No. 52-17-Q, Kettleman North, Kings	17-22-18	7,191	br. sh. drlg.
Standard Oil, No. 74-17-Q, Kettleman North, Kings	17-22-18	8,385	hd. sh. drlg.
Standard Oil, No. 85-17-Q, Kettleman North, Kings	17-22-18	5,400	sd. sh. drlg.
Standard Oil, No. 87-17-Q, Kettleman North, Kings	17-22-18	4,186	sd. sh. drlg.
Standard Oil, No. 81-19-Q, Kettleman North, Kings	19-22-18	7,540	flow 1,500 b.d.
Standard Oil, No. 41-21-Q, Kettleman North, Kings	21-22-18	8,190	O.S. drlg.
Standard Oil, No. 72-21-Q, Kettleman North, Kings	21-22-18	6,473	sd. sh. drlg.
Standard Oil, No. 83-21-Q, Kettleman North, Kings	21-22-18	7,785	recmtd. 7,147
Epco, Inc., No. 1 Cuyama, Creston, San Luis Obispo	27-27-13	5,250	hd. sh. drlg.
Newton, S. M., No. 1 Stafford, Panorama, S. L. Obispo	18-21-21	2,697	cmtd. 2,630
Texas Co., No. 1 Arroyo Seco, Greenfield, Monterey	11-19- 5	3,998	sd. sh. drlg.
Standard Oil, No. 1 Calpac, Rio Vista, Solano	15- 5- 2	3,650	sd. sh. drlg.
Buttes Oilfields, No. 5 Butte, Sutter Buttes, Sutter	1-15- 1	2,487	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S. T. R.	Depth	Status—
D. & J. Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	4,161	sd. sh. drlg.
F. S. D. Oil, No. 1 Willacy, Torrance, Los Angeles	23- 4-14	3,790	pump water
Kildumac Oil, No. 1 Mitchell, Torrance, Los Angeles	23- 4-14	5,144	rig to pump
Packard Oil, No. 1 Louden, Torrance, Los Angeles	23- 4-14	5,086	sd. sh. drlg.
Pac. West. Oil, No. 22 Lomita, Torrance, Los Angeles	23- 4-14	4,965	sd. sh. drlg.
Standard Oil, No. 1-11 Marble, Torrance, Los Angeles	22- 4-14	4,970	sd. sh. drlg.
General Pet., No. 7 Poggi, Harbor City, Los Angeles	23- 4-14	3,800	pump water
Texas Co., No. 6 Oakley, Harbor City, Los Angeles	30- 4-13	2,898	sd. sh. drlg.
Union Oil, No. 67 Callender, Dominguez, Los Angeles	33- 3-13	7,235	flow 440 b.d.
Union Oil, No. 68 Callender, Dominguez, Los Angeles	32- 3-13	7,395	sd. sh. drlg.
Shell Oil, No. 98 Reyes, Dominguez, Los Angeles	33- 3-13	7,090	sd. sh. drlg.
Universal Consd., No. 15 Trust, Rosecrans, L. A.	18- 3-13	7,817	flow 285 b.d.
Royalty Ser. Corp., No. 4 Gordon, Rosecrans, L. A.	19- 3-13	5,794	sd. sh. drlg.
Bankline Oil, No. 1 Kirby, Rosecrans, Los Angeles	19- 3-13	7,653	redrlg. 7,590
Howard Oil, No. 1 H. O., Rosecrans, Los Angeles	20- 3-13	7,645	O.S. drlg.
Wilshire Oil, No. 1 Leitch, Rosecrans, Los Angeles	19- 3-13	7,695	sd. sh. drlg.
Marion, J. H., No. 2 Ahtens, Rosecrans, Los Angeles	19- 3-13	7,893	O.S. drlg.
Beloil Corp., No. 1 Castleberry, Potrero, L. A.	28- 2-14	5,450	idle

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd. cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill stem test.
D.&A., dry and abandoned
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., owell drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrk. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing)
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C., or W.O.C.S., waiting on cement to set.
W.O.O., waiting for orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Empire Oil, No. 1 Samarkand, Playa Del Rey, L. A.	34-	2-15	6,180	sd. sh. drlg.
Standard Oil, No. 1 Ward, Aliso Canyon, L. A.	27-	3-16	6,697	sd. sh. drlg.
Tide Water A. O., No. 11 Porter, Aliso Canyon, L. A.	27-	3-16	2,020	hd. sd. drlg.
Union Oil, No. 1-27 Orcutt, Alison Canyon, L. A.	27-	3-16	5,980	testing
General Pet., No. 35 Ford, Wilmington, L. A.	4-	5-13	3,769	O.S. drlg.
General Pet., No. 9 S.P., Wilmington, Los Angeles	2-	5-13	4,040	O.S. drlg.
Hollywood Oil, No. 7 Baxter, Wilmington, L. A.	35-	4-13	2,994	sd. sh. drlg.
Long Beach Dev., No. 1-X Harbor, Wilmington, L. A.	3-	5-13	3,875	sd. sh. drlg.
Long Beach Dev., No. 2-X Harbor, Wilmington, L. A.	2-	5-13	3,865	sd .sh. drlg.
Long Beach Dev., No. 3-X Harbor, Wilmington, L. A.	2-	5-13	3,761	sd. sh. drlg.
Long Beach Dev., No. 4-X Harbor, Wilmington, L. A.	2-	5-13	3,754	sd. sh. drlg.
Long Beach Dev., No. 5-X Harbor, Wilmington, L. A.	2-	5-13	2,449	sd. sh. drlg.
Long Beach Dev., No. 6-X Harbor, Wilmington, L. A.	2-	5-13	3,840	sd. sh. drlg.
Long Beach Dev., No. 1-Y Harbor, Wilmington, L. A.	2-	5-13	3,250	sd. sh. drlg.
Long Beach Dev., No. 2-Y Harbor, Wilmington, L. A.	2-	5-13	2,455	sd. sh. drlg.
Long Beach Dev., No. 3-Y Harbor, Wilmington, L. A.	2-	5-13	2,587	sd. sh. drlg.
Long Beach Dev., No. 6-Y Harbor, Wilmington, L. A.	2-	5-13	2,153	sd. sh. drlg.
Oakes & Combs, No. 5-D Harbor, Wilmington, L. A.	3-	5-13	2,426	sd. sh. drlg.
Richfield Oil, No. 24-P.D., Wilmington, L. A.	2-	5-13	2,098	sd. sh. drlg.
Richfield Oil, No. 30-P.D., Wilmington, L. A.	2-	5-13	3,210	flow 306 b.d.
Security Drlg., No. 3 O. & B., Wilmington, L. A.	32-	4-13	2,880	flow 260 b.d.
Signal O. & G., No. 1-C.D., Newport, Wilmington, L.A.	2-	5-13	4,300	flow 500 b.d.
Signal O. & G., No. 2-C.D., Newport, Wilmington, L.A.	2-	5-13	4,275	O.S. drlg.
Signal O. & G., No. 1-S.P., Wilmington, Los Angeles	2-	5-13	2,790	sd. sh. drlg.
Superior Oil, No. 1 Seaside, Wilmington, L. A.	2-	5-13	2,915	pump 120 b.d.
Union Pacific R. R., No. 109, Wilmington, L. A.	3-	5-13	2,825	sd. sh. drlg.
Union Pacific R. R., No. 16-E, Wilmington, L. A.	3-	5-13	2,691	sd. sh. drlg.
Union Pacific R. R., No. 17-E, Wilmington, L. A.	34-	4-13	3,391	P.B. 3,070
Ridge Oil, No. 1 Club, Montebello, Los Angeles	3-	2-12	6,490	sd. sh. drlg.
St. Helens Pet., No. 28 Monterey, Montebello, L. A.	2-	2-12	6,731	deepening
St. Helens Pet., No. 30 Monterey, Montebello, L. A.	2-	2-12	7,275	flow 760 b.d.
St. Helens Pet., No. 2 Eggleston, Montebello, L. A.	2-	2-12	7,145	squeeze cmt.
St. Helens Pet., No. 2 Taylor, Montebello, L. A.	2-	2-12	7,135	completing
Standard Oil, No. 4 Harvey, Montebello, L. A.	2-	2-12	6,673	milling 6,300
Standard Oil, No. 3 Braun, Montebello, L. A.	2-	2-12	7,135	deepening
Standard Oil, No. 5 Whitehead, Montebello, L. A.	3-	2-12	7,185	flow 792 b.d.
Standard Oil, No. 6 Whitehead, Montebello, L. A.	3-	2-12	7,435	O.S. drlg.
Union Oil, No. 2 Howard & Smith, Montebello, L. A.	2-	2-12	6,550	sd. sh. drlg.
Union Oil, No. 5 Howard & Smith, Montebello, L. A.	2-	2-12	6,411	sd. sh. drlg.
Union Oil, No. 5 Paul Howard, Montebello, L. A.	2-	2-12	3,682	sd. sh. drlg.
Stanley Oil, No. 1 Montebello, Montebello, L. A.	2-	2-12	7,010	redrlg. 6,686
Bev. Mont. Oil, No. 1 West, Montebello, Los Angeles	11-	2-12	4,672	sd. sh. drlg.
Mont. Wesco, Inc., No. 1 Montebello, Montebello, L.A.	2-	2-12	7,616	O.S. drlg.
Mont. Reservoir Oil, No. 2 Water, Montebello, L. A.	2-	2-12	7,090	O.S. drlg.
Pongratz Pet., No. 1 Newmark, Montebello, L. A.	3-	2-12	7,511	O.S. drlg.
La Merced Drlg., No. 1 Drake, Montebello, L. A.	2-	2-12	6,705	redrlg. 6,398
V-8 Oil, No. 1 M.B., Montebello, Los Angeles	2-	2-12	7,633	O.S. drlg.
Bush Oil, No. 1 Alauzet, Montebello, Los Angeles	3-	2-12	142	sd. sh. drlg.
Herley-Kelly, Inc., No. 2 Masser, Montebello, L. A.	2-	2-12	5,986	sd. sh. drlg.
Colorado Oil, No. 19 Granger, Whittier, Los Angeles	22-	2-11	3,581	sd. sh. drlg.
Taylor Prod., No. 1 Gregg, Whittier, Los Angeles	17-	2-11	3,380	sd. sh. drlg.
Perry & Associates, No. 1 Pool, Long Beach, L. A.	29-	4-12	6,181	sd. sh. drlg.
Union Oil, No. 21 Hole, East Coyote, Orange	23-	3-10	2,173	sd. sh. drlg.
Tide Water A. O., No. 54 Anaheim, E. Coyote, Orange	24-	3-10	3,634	will deepen
Bartholomae Oil, No. 8 Stern, East Coyote, Orange	22-	3-10	4,788	O.S. drlg.
Standard Oil, No. 67 Emery, West Coyote, Orange	24-	3-11	4,191	sd. sh. drlg.
Severns Drlg., No. 4 McNally, West Coyote, Orange	24-	3-11	3,982	sd. sh. drlg.
Southwest Expl., No. 15 State, Hunt. Beach, Orange	10-	6-11	5,950	cleaning out
Southwest Expl., No. 16 State, Hunt. Beach, Orange	10-	6-11	3,595	sd. sh. drlg.
Southwest Expl., No. 18 State, Hunt. Beach, Orange	10-	6-11	4,900	pump 240 b.d.
Southwest Expl., No. 19 State, Hunt. Beach, Orange	10-	6-11	1,896	sd. sh. drlg.
Duchess Oil, No. 4 Farnsworth, Hunt. Beach, Orange	34-	5-11	3,600	will deepen

OKLAHOMA

Week Ending May 27

NORTHERN OKLAHOMA

Atoka County

Gilbert No. 1 Rich, SE SE SW Sec. 2-1-12. S.D. 728 ft.

Cleveland County

Nels Burton No. 1 Boggs, NE NE SE Sec. 16-9-2w. Drlg. 6,630 ft.

Nels-Burrton No. 1 Hirsch, NW NW NE Sec. 17-9-2w. O.W.P.B.; O.T.D. 7,692 ft.; T.D. 7,695 ft.; pulled pmp. and S.D.

Comanche County

Mid Night Oil No. 1 Howe, NW NW NE Sec. 30-2-13w. O.W.D.D.; O.T.D. 703 ft.; drlg. 802 ft.

Ellis County

Enterprise Drlg. Co. No. 1 Wahl, SE NW NW Sec. 1-19-25w. Sd. 660-65 ft.; T.D. 730 ft.; S.D.O.

Garfield County

Keriyn Oil Co. No. 1 Hein, NW NW NW Sec. 36-22-4w. Drlg. 4,312 ft.

Garvin County

Ker-Lyn Oil Co. No. 1 Butterly, NE NE SE Sec. 22-1-1. O.W.D.D.; O.T.D. 3,205 ft.; T.D. 5,005 ft.; cmtd. perf. except two; 2,730-32 ft.; rec. 2,600,000 cu. ft. gas; comp.

Grant County

Carter Oil No. 1 Staggers, C W½ SE NW Sec. 4-25-3w. Miss. 4,771 ft.; drlg. 4,999 ft.

Smythe & O'Mara No. 1 State, C SE SW Sec. 16-25-4w. Drlg. 2,855 ft.

Harmon County

Russo Drlg. No. 1 Abernathey, C SW SW Sec. 12-2-26w (3,000-ft. test). T.D. 1,975 ft., sh.; plg. csg.

Harper County

Sinclair Prairie No. 1 George, SW SW SW Sec. 5-27-23w. Lytn. 4,450 ft.; drlg. 4,868 ft.

Hughes County

Carter Oil No. 1 Hamilton, C W½ NE SW Sec. 33-4-9. T.D. 4,235 ft., S.D.

Continental Oil No. 1 Hudson, SE SE SE Sec. 8-4-9. Drlg. 3,900 ft.

Jackson County

English & Morgan No. 1 Lee, NW NW SE Sec. 36-2-19w. S.G. 1,360-63 ft.; T.D. 1,603 ft.; P.B. 1,243 ft.

Kingfisher County

K. A. Ellison No. 1 Baker, NE NE SE Sec. 20-19-5w. Miss. 6,290 ft.; drlg. 7,320 ft.

Ace Gutowsky No. 1 Lankford, NE NE SE Sec. 34-17-6w. Miss. 7,014 ft.; Woodford 7,531 ft.; Mmr. 7,562 ft.; Wlx. 8,105 ft.; 2nd Wlx. 8,275 ft.; T.D. 8,330 ft.; S.D.O.

Kiowa County

C. J. Hagerling No. 1 Kimray, SW SW NW Sec. 36-5-18w. S.D. 927 ft.

Russell S. Tarr No. 1 Kelsay, SW SW NW Sec. 20-7-17w. Pay 1,050-51½ ft.; F. 70 B.O.P.H. by hds.

Lincoln County

Cooper Drlg. No. 1 Johnson, NE NE NW Sec. 32-15-5. Drlg. 2,581 ft.

Fain Drlg. Co. No. 1 Wertman, SW SW SW Sec. 12-15-4. Drlg. 3,863 ft.

Helmerich & Payne No. 1 Johnson, SE SE SE Sec. 2-15-1. 2nd Wlx. 5,313 ft.; T.D. 5,370 ft.; D.&A.

Mason & Nicholls No. 1 Lindsay, SW SE SE Sec. 26-12-3. Drlg. 500 ft.

Star Oil Co. No. 1 Morrow, SE SE SW Sec. 28-15-6. Prue 3,208-31 ft.; T.D. 3,270 ft.; D.&A.

W. A. Villines No. 1 Marshall, NW NE NE Sec. 28-15-4. Cd. 4,225-35 ft.; rec. sd.

Oklahoma County

R. Olsen No. 1 White, C NE NE Sec. 30-11-1, Via. 6,338 ft.; dolo. 6,410 ft.; Wlx. 6,503 ft.; 2nd Wlx. 6,610 ft.; T. D. 6,636 ft.; F. 175 B.O. in 24 hr.; 20% wtr.

Pawnee County

Ed Kelly No. 1 Hill, SW SW SE Sec. 1-21-5. T.D. 2,845 ft.; fsg.

Pittsburg County

Phillips Pet. Co. No. 1 Hubacker, C NW NE Sec. 11-7-15. Dutcher 5,973 ft.; Hntn. 7,344 ft.; Wlx. 7,514 ft.; fsg. D.P.

Payne County

Kirk-Greenway No. 1 Kautz, NW SW SE Sec. 6-18-2. Drlg. 4,480 ft.

Pontotoc County

L. Walker No. 1 King, SW SE NW Sec. 5-4-7. S.D.O. 1,110 ft.

Pottawatomie County

Alma Oil Co. No. 1 Johnson, SW NW SW Sec. 19-6-5. Hntn. 3,322 ft.; Wlx. 3,990 ft.; cg. 3,995-4,013 ft., sd.

F. W. Cooper No. 1 Strawn, SE SE SW Sec. 32-8-5. Drlg. 3,075 ft.

I.T.I.O. No. 1 Lambert, C E½ NW NE Sec. 6-5-2. Drlg. 1,982 ft.

Sequoyah County

Thompson Brs. No. 1 Ruby, NW NW NE Sec. 30-12-22. Drlg. 1,510 ft.

Seminole County

Flynn et al No. 1 Work, NE SE SE Sec. 19-8-7. Drlg. 2,572 ft.

Woodson Oil No. 1 Goodrich, NE SW SE Sec. 14-5-5. T.D. 2,920 ft.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. Drlg. 11,835 ft.

John Koberg No. 1-A Harms, C NW NE Sec. 6-10-16w. Drlg. 4,310 ft.

L. B. McWhirter No. 1 fee, NW SW SW Sec. 34-8-19w. Drlg. 2,245 ft.

SOUTHERN OKLAHOMA

Carter County

Pure Oil Co. No. 1 Noble, NE SE Sec 35-3s-1e. Arb. 7,930 ft.; S.S.O. 8,333-40 ft.; T.D. 8,500 ft.; bailed dry.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. Drlg. 1,480 ft.

Marshall County

Hughes et al No. 1 Vittitto, C NE SE Sec. 11-5s-4e. O.W.D.D.; O.T.D. 7,100 ft.; T.D. 7,110 ft.; S.D.

Tillman County

Oil Inv. No. 2 Hammell, NE NW NW Sec. 6-5s-15w. O.W.D.D.; O.T.D. 2,829 ft.; T.D. 3,353 ft.; S.D.

KANSAS

Week Ending May 27 (Descriptions are East unless marked otherwise)

Barton County

Amerada Pet. Corp. No. 1 Dageman, C NE NE Sec. 23-19-15w. S.S.O. 3,253 ft.; fsg. 3,356 ft.

Crown Pet. No. 1 Koch, NE NE NE Sec. 23-20-12w. Lans. 3,104 ft.; Arb. 3,333 ft.; T.D. 3,358 ft.; 3,000 ft. O.I.H.

R. E. Day et al No. 1 Feltes, SE SE NE Sec. 14-16-12w. O.W.D.D.; S.S.O. 2,954-62 ft.; Lans. 3,069 ft.; C.O. 3,200 ft.

Butler County

Carey & Jennings No. 1 Kelly, C SW Sec. 20-27-4. Set 10-in. 1,111 ft.; C.O.

Elbar Corp. No. 1 Martin, NE SE SE Sec. 34-26-7. C.O. 985 ft.

Simpson Oil Co. No. 1 Evans, CSL SW Sec. 21-28-7. Drlg. 2,690 ft.

Chase County

Alex McCoy No. 1 Berns, SE NW NE Sec. 29-22-6. Lans. 1,985 ft.; K.C. 2,170 ft.; drlg. 2,665 ft.

Cowley County

C. L. Carlock No. 1 Shaffer, SW SE SW Sec. 3-31-4. Drlg. 3,000 ft.

Cities Service No. 1 Pope, SE NE SW Sec. 21-31-3. Drlg. below 2,240 ft.

Dickinson County

Franks et al No. 1 Huffman, NW NW SW Sec. 11-13-1, H.F.W.; drlg. 2,640 ft.

Ellis County

Central Pet. No. 4 Hadley, NE NE SE Sec. 12-11-18w. Lans. 3,054 ft.; T.D. 3,162 ft.; cmtg. 7-in. 3,162 ft.

Ellsworth County

I. W. Murfin No. 1 Loula, NW NW SE Sec. 28-16-10w. Drlg. 280 ft.

Geary County

Scheu & Tague No. 1 Aye, NW SW NW Sec. 10-12-8. 8-in. 1,755 ft.; C.O.

Harvey County

Garden et al No. 1 Lagree, SE SE SE Sec. 4-23-3w. O.W.D.D.; O.T.D. 280 ft.; drlg. 2,530 ft.

Kiowa County

Sinclair Prairie No. 1 Price, NW NW SW Sec. 22-28-20w. T.D. 3,080 ft.; P.B. 2,140 ft.; pipe twisted off; set whpstk. 1,063 ft.; drlg. 2,610 ft.

Leavenworth County

John Hardaway No. 1 Scheller, SW SE SW Sec. 30-10-22. S.D. 3,907 ft.

Mead County

Pacific Midwest Oil No. 1 Rexford, NE SE SW Sec. 8-30-29w. S.D. 1,435 ft.

Miami County

Dave Judd No. 1 Waite, CNL SW SE Sec. 4-15-25. Drlg. 140 ft.

Norton County

Power Oil et al No. 1 Van Patten, C NE Sec. 26-4-21w. Lans. 3,325 ft.; Arb. 3,610 ft.; T.D. 3,665 ft.; shot and rec. 100 ft. O.I.H.

Osage County

J. M. Edwards No. 1 Detrick (O.W.D.D.), C NW SE Sec. 21-14-15. O.T.D. 1,200 ft.; drlg. 1,325 ft.

Ottawa County

Babcock Oil No. 1 Copeman, NW NW Sec. 18-10-2w. Miss. 2,835 ft.; Simp. 3,631 ft.; Wlx. 3,675 ft.; U.R. 3,690 ft.

Phillips County

Blue Stem Oil Co. No. 1 Donaldson, SE NE NE Sec. 25-5-18w. Lans. 3,080 ft.; 700 ft. O.I.H.

Rice County

Central Pet. No. 1 Dippel, CNL NE SE Sec. 27-19-10w. W.O.C. 218 ft.

Continental Oil No. 1-B Hamilton, SW SW NE Sec. 19-18-7w. W.O.C. 214 ft.

Gulf Oil No. 1 Barngrover, CWL SW SW Sec. 30-19-9w. Lans. 2,943 ft.; S.O. 3,018-20 ft.; Arb. 3,269-84 ft.; T.D. 3,284 ft.; P. 441 B.O. in 8 hrs.; pot. 1,322 B.O.

Gulf Oil No. 1 Linke, CEL NE SE Sec. 36-19-10w. Simp. 3,266 ft.; Arb. 3,280 ft.; T.D. 3,283 ft.; P. 109 B.O. in 18 hr.; pot. 327 B.O.; comp.

McPherson Drlg. Co. No. 1 Cramm, SE SE SW Sec. 15-19-9w. Drlg.

Phillips Pet. Co. No. 1 Brandenstein, C SE NW Sec. 35-19-10w. Arb. 3,302 ft.; T.D. 3,306 ft.; S. 8 B.O.P.H.

Russell County

Cities Service No. 1 Dutt, NW NW SE Sec. 18-13-14w. Drlg. 2,485 ft.

Saline County

Central States Oil Co. No. 1 Crawford, NW SW NE Sec. 26-13-3w. Lans. 2,130 ft.; Miss. 2,786 ft.; T.D. 3,622 ft.; D. &A.

Shawnee County

W. M. McKnab No. 1 Fritz, SW SE NW Sec. 4-12-14. Miss. 1,901 ft.; Hunton 2,380 ft.; drlg. 2,625 ft.; last report.

Sumner County

Burke-Greis No. 1 Seyfert, SE SE SE Sec. 18-34-2. Drlg. 1,562 ft.

Woodson County

Roby et al No. 1 Meairs, SW SW NW Sec. 21-25-14. Drlg. 1,230 ft.

C. L. Sheedy No. 1 Long, SE SE SW Sec. 28-26-14. T.D. 1,550 ft., sh.; D.&A.

MISSOURI

Andrew County

Birkett et al No. 1 Gee, NW NW SE Sec. 28-60n-35w. T.D. 90 ft.; engine trouble.

Cass County

C. C. Lewis et al No. 1 Chandler, NE cor. Sec. 4-45-33w. Drlg. below 1,325 ft.

Clay County

Eastern Drlg. Co. No. 1 Williams, NW NW NE Sec. 28-53-32w. Drlg.

Frank Hopper et al No. 1 Black, NW NW NW Sec. 36-52-32w. Based Miss. 1,225 ft.; stg. csg. 1,226 ft.

Clinton County

C. E. King et al No. 1 Willis, NW NW NW Sec. 13-55n-32w. Drlg. below 705 ft.

DeKalb County

Geo. W. Moore No. 1 McQuarter, NE SW SW Sec. 11-57n-31w. T.D. 750 ft.; stg. csg.

Hickory County

A. M. Sims No. 1 Wilson, NW NW NW Sec. 3-37n-21w. S.D. 1,596 ft.

Holt County

Brin & Nathan No. 1 Garrett, C NE NE Sec. 2-61n-38w. Loc.

Markham et al No. 1 Gaffney, SW SE SW Sec. 24-63-40w. R.R.

J. H. Everitt et al No. 1 Spring, SW SW SE Sec. 30-62-38w. T.D. 2,440 ft.; prep. mud.

Mercer County

Geo. W. Moore No. 1 Castell, NE NE NE Sec. 32-65-24w. Loc.

Shelby County

Chas. Delfeld No. 1 Turner, C NW NW Sec. 27-56n-9w (wildcat). Drlg. 204 ft.

Sullivan County

H. V. Elwell No. 1 Taylor, CNL S½ S½ Sec. 12-62-21w. Rig.

NEBRASKA

Cass County

Golden Rod Oil Co. No. 1 Sparer, SE SE

SE Sec. 8-11-13e. Drlg. below 380 ft.

Hitchcock County

C. L. Price No. 1 Carter, SE NE SW Sec. 35-2n-32w. Lans. 3,976 ft.; S.D. 4,000 ft.; S.O.

Scotts Bluff County

J. A. Fairy Pet. Corp. No. 1 McCully, C SE SE Sec. 35-23n-58w. S.G. 785 ft.; U.R. 6-in. at 1,400 ft.

Albert Wood No. 1 McHenry, SE NE NE Sec. 33-23n-57w. S.D. 600 ft., T.D.

ARKANSAS

Columbia County

Atlantic Ref. Co. No. 1 J. A. Foster, C NW NE Sec. 24-17-20. Drlg. 2,310 ft.

Atlantic Ref. Co. No. 1-E Garrett, C SE NW Sec. 24-17-20. T.D. 7,640 ft.; circulating around stk. csg.

Atlantic Ref. Co. No. 1 Pine Woods Lbr. Co., C NE NE Sec. 16-18-22. Spd.

Lion Oil Ref. Co. No. 1 Crisp-Glasgow Unit, C NE SE Sec. 23-17-20. T.D. 7,669 ft.; set csg.; W.O.C.

Lion Oil Ref. Co. No. 2 Crisp-Glasgow Unit, C NW SE Sec. 23-17-20. Sat. L. 7,553-7,648 ft.; set csg.; drlg. plug.

Lion Oil Ref. Co. No. 1 A. C. Garrett, C SE SE Sec. 13-17-20. Drlg. rd.&gr. sh. 6,180 ft.

Lion Oil Ref. Co. No. 1 Tissue, C SW NW Sec. 15-18-19. Drlg. 1,521 ft.

Phillips Pet. Co. No. 1 Askew Unit, C NE NW Sec. 4-17-21. T. Tr. Pk. 4,620 ft.; T.C.V. 5,920 ft.; drlg. 8,431 ft.

Shell Pet. Corp. No. 1 Foster, SW SW Sec. 24-17-20. Spd.

Shell Pet. Corp. No. 1 Glasgow, C NW NW Sec. 23-17-20. Cg. sat. 7,517 ft.

Southwood Oil Co. No. 1 J. A. Foster, C NE NE Sec. 24-17-20. R.U.

Southwood Oil Co. No. 1 L. A. Grelling, C NE NW Sec. 23-17-20. T.D. 7,489 ft.; D.S. stk.; P.B. 6,720 ft.; circ. with oil; could not pull D.S.; P.B. 2,400 ft.; drld. to 2,770 ft.; lost circ.; P.B. 2,352 ft.; to sdtrk.; drlg. 6,720 ft.

Standard Oil Co. of La., No. 1-B E. D. Harris et al, 660 ft. N, 664 ft. W. SE cor. SE NE Sec. 15-17-19. Drlg. sd.&sh. 6,986 ft.

Standard Oil Co. of La. No. 2 Phillips, 660 ft. S, 665 ft. W, NE cor. NE NW Sec. 15-17-19. Drlg. sdy. sh. 6,420 ft.

G. H. Vaughn No. 1 D. B. Baker Unit, C SW SW Sec. 14-17-20. T. por. 7,411 ft.; set csg.; W.O.C.

G. H. Vaughn No. 2 Baker, C NE SE Sec. 15-17-20. Spd.

Lafayette County

Erwin & Leach and East Texas Ref. Co. No. 1 Harleston, Sec. 23-16-24. R.U.

Erwin & Leach and East Texas Ref. Co. No. 1 Wright, Sec. 24-16-24. Drlg. 595 ft.

Standard Oil Co. of La. No. 2 Waters et al, SE cor. NE SW Sec 7-16-22. T.D. 7,254 ft.; acd. with 3,000 gal.; C.O.

Little River County

C. & M. Drlg. Co. No. 1 Strawn, SW cor. SE Sec. 20-10-32. Cd. 1,270-80 ft.; sh.& wtr. sd.; reported S.O. 1,365-70 ft.; 1,542-64 ft. sd. and 1,564-74 ft. sdy. L.; cor. T.D. 1,598 ft.; set 7-in. csg. 1,580 ft. (cor.); T.D. 1,598 ft.; drlg. plug.

Lonoke County

J. F. Russell No. 1 J. T. Gunter, 440 ft. N, 577 ft. W, SE cor. Sec. 17-5n-10w. S.D. 2,009 ft.

Nevada County

Berry Asphalt Co. No. 1 Groves Lbr. & Tbr. Co., SE cor. N SW Sec. 4-14-20. Drlg. white sd. 1,962 ft.

Ouachita County

J. E. Crosbie, Inc., No. 2 F. A. Laney, Sec. 36-15-16. T.D. 2,007 ft.; circulating.

Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. SE cor. SE NW Sec. 27-15-15. O.W.W.O.; O.T.D. 4,926 ft.; comp. as disc. well, Snow Hill field; perf. csg. 2,732-35¼ ft., 2,728-31¼ ft., 2,744-47½ ft., and 2,756-60 ft.; est. 2,300 ft. F.I.H., 1% oil; P.B. 2,770 ft.; set cmt. retainer 2,719 ft.; sqzd.; S.D.; W.O. 2,746 ft.

Saline County

A. W. Givens No. 1 Williams, 375 ft. S, 420 ft. E, NW cor. NE NE Sec. 18-3s-15w. R.U.&S.D. 104 ft.

Sevier County

R. A. McArthur No. 1 Bell Est., SE cor. SE SW Sec. 29-9s-32w. S.D. 20 ft.

Union County—Schuler

E. M. Jones No. 1-C Murphy Ld. Co., Sec. 24-18-18. Drlg. 5,272 ft.

Lion Oil Ref. Co. No. 3 F. N. Bank, C S½ SW SE Sec. 12-18-18. Set csg. 7,695 ft.; tstg.

Lion Oil Ref. Co. No. 1 S. Frank, C S½ SW NE Sec. 12-18-18. R.U.

Lion Oil Ref. Co. No. 1 S. John, SE cor. SE NE Sec. 12-18-18. Spd.

Marine Oil Co. No. 7 fee, 330 ft. SE cor. NE NE Sec. 20-18-17. Drlg. 6,450 ft.

Phillips Pet. Co. No. 1 Mill, NW cor. S½ Lot 4, SW Sec. 18-18-17. Drlg. 4,620 ft.

Union County—Other

S. S. Alexander No. 1 J. P. Pickering, C NW NW SW Sec. 31-16-15. Drlg. 1,429 ft.

Bob Milam No. 1 Primm Est., SE cor. Lot 5, NE Sec. 1-16-16. Drlg. 707 ft.

Oliphant Oil Co. No. 1 Union Sawmill Co., C SW NW Sec. 22-19-14. Cd. 2,492-2,512 ft.; rec. 1 ft. 6 in. tight gr. sd.; set 9⅝-in. csg. 3,184 ft.; T. C.V. 5,405 ft.; cd. Rynld. L. to 7,950 ft.; no show; rng. elec. survey.

Sam Sebersky et al No. 2 J. N. Jerry, 100 ft. SW of No. 1, Sec. 21-17-14. Oil and S.W. 2,687-98 ft.; set 6-in. csg. 2,691 ft.; T.D. 2,698 ft.; swbg. S.W. and S.S.O. 2,698 ft.

LOUISIANA

N. LOUISIANA WILDCATS

Beauville Parish

Ark. La. Gas Co. No. 2 Gayoso, 660 ft. SW cor. SE Sec. 14-16-10. T. Tr. Pk. 5,432 ft.; D.S.T. 5,796-5,805 ft. tstd. dry in 26 min.; set 8⅝-in. csg. 6,300 ft.; T.D. 8,319 ft.; set csg.; perf.

Ark. La. Gas Co. No. 1 Thomas, NW cor. Sec. 13-16-10. Drlg. 3,467 ft.

Ark. La. Gas Co. No. 1-B Thomas et al, SE cor. Sec. 15-16-10. Set 10¾-in. csg. 1,208 ft.

Hunt Oil Co. No. 1 T. A. Loe, C NE Sec. 2-16-6. R.U.

Bossier Parish

Harry Hanbury No. 1 Leonard, 660 ft. NE cor. Sec. 19-19-13. Set 16-in. csg. 127 ft.; set 10-in. csg. 1,391 ft.; drlg. 4,986 ft.

Caddo Parish

R. E. Allison No. 9 Ellerbe, Sec. 26-18-14. Set surf. csg. 2,240 ft.; por. L. 5,546-60 ft.; set 5½-in. csg. at T.D. 5,560 ft.

Bachelor, Adams & Birdwell No. 2 Van Horn, SW cor. Sec. 22-22-16. S.D. 1,125 ft.; wtr.

Ballow & Williams No. 1 Crystal fee, SE cor. NE SW Sec. 24-21-16. Set 6-in. csg. 975 ft.; W.O.S.R. 981 ft.

T. L. Benson No. 1 Ark. Fuel, NW cor. SE SW Sec. 25-21-15. Drlg. sh. 1,310 ft.

Mose Browning et al No. 2 Browning, SE cor. Sec. 21-22-16. Drlg. sdy. sh. 2,425 ft.

Carney et al No. 3 Hart, SE NW Sec. 21-21-16. T.D. 2,423 ft.; tstd. S.W. 2,423 ft.; P.B. 2,380 ft.; W.O.C.

Cryer & Davis No. 2 Crystal fee, Sec. 25-21-16. R.U.

Drillers, Inc., No. 1 Ellerbe, SW cor. Sec. 23-18-14. Set 5½-in. csg. 5,554 ft.; tstg. 5,560 ft.

J. T. Driscoll No. 1 Woolworth, SE cor. Sec. 26-20-15. Set 9⅝-in. csg. 1,370 ft.; T.D. 5,607 ft.; W.O. csg.

East Texas Ref. Co. No. 2 Williams, SE cor. NE Sec. 5-23-15. Set 5½-in. csg. 6,130 ft.; W.O.C.

East Tex. Ref. Co. No. 1 U. S. Govt., NW cor. NW SE Sec. 5-23-15. Drlg. anhy. 5,653 ft.

M. M. Ferrell No. 1 Satterwhite, SE NW Sec. 10-20-16. Set 6-in. csg. 1,335 ft.; tstd. S.W.; S.O. 1,580 ft.; acdzd. with 3,000 gal.; tstd. S.W.; S.O.; S.D. 2,010 ft.; rig rep.

Harry Fotiades No. 1 Brown, 880 ft. N, 115 ft. W, C Sec. 35-18-14. Set 9⅝-in. csg. 1,505 ft.; por. L. 5,577-92 ft.; set csg.; drlg. plug.

Hamilton & Stone No. 1 Atlanta, 500 ft. S, 244 ft. W, NE cor. NW Sec. 2-20-16. Drlg. sh. 450 ft.

Lisbon Iberia Oil Co. No. 1 Atkins, Sec. 2-17-14. R.U.

C. C. Lowery No. 1 Ledbetter, Sec. 7-20-15. R.U.

Midfield Oil Co. No. 1-B Muslow, 330 ft. N, 400 ft. W, C Sec. 6-20-15. T.D. 2,256 ft.; set 5½-in. csg. 2,206 ft.

Oblinger & Ritter No. 2 Boisseau, SE cor. Sec. 34-21-16. Set 6-in. csg. 971 ft.; T.D. 977 ft.; pmpd. S.W.; P.B. 971 ft.; W.O.C.

Red Iron Drlg. Co. No. 1 Model Gardens Unit, SE cor. Sec. 23-18-14. Slight porosity 5,556-59 ft. and 5,564-69 ft.; set csg.; swbd. dry and ripped csg. 5,549-74 ft.; used 5,000 gal. acd.; drlg. ahd. 5,616 ft.; no prod. in Pettit.

Skidmore-O'Mara, Inc., No. 1 Muslow, O.W.W.O., SW Sec. 31-21-15. S.D. 1,000 ft.

Joe Straughn No. 1 Hart, 430 ft. N, 330 ft. E, SW cor. Sec. 29-21-16. Set 6-in. csg. 2,220 ft.; tstd. dry; fsg. 2,398 ft.; W.O.S.R.

Joe Straughn No. 1 Stiles, SW cor. Sec. 29-21-16. Drlg. sh. 400 ft.

Wardell Oil Co. and Harry Fotiades No. 1 R. Mandel, Sec. 26-18-14. R.U.

Caldwell Parish

Critchett & Woods (formerly E. T. Oakes) No. 1 Kyles, NE cor. SW NE Sec. 18-11-3e. S.D. 1,503 ft.; rig rep.

Claiborne Parish

Maritsky & Bibby No. 3 McClung, SW Sec. 29-21-7. Set 10-in. csg. 90 ft.

De Soto Parish

Atlantic Ref. Co. and Seaboard Oil Corp. No. 1 Frank Grocery Co., NW Sec. 35-12-11. Set 8-in. csg. 101 ft.

Daniel Murray No. 1 Russell, 50 ft. N, 500 ft. W, SE cor. NE NW Sec. 12-11-16. O.W.D.D.; O.T.D. 2,046 ft.; R.U.; to D.D.

La Salle Parish

Snow Black Oil Co. No. 1 Pendarvis, 250 ft. NE cor. SW SE Sec. 21-10-1e. S.D. 1,350 ft.

Snow Black Oil Co. No. 2 Tulios, SW cor. SE Sec. 23-10-1e. R.U.

G. W. Ziegen No. 16 La. Cent. Lbr. Co., SW cor. Sec. 24-11-2e. T. Wlx. 1,619 ft.; S.W.; S.D.; W.O. 1,690 ft.

Natchitoches Parish

Jack Lent et al No. 1 Whatley, SW cor. Sec. 17-10-10, S.O.&G., reported at 1,490-1,516 ft.; D.S.T. 3,282-96 ft.; tstd. 100 ft. mud cut with 40-grv. oil; P.B. 3,300 ft.; set 6⅝-in. csg. 3,282 ft.; bld. down 600 ft. of bttm.; S.S.O.; ran 2-in. tbg. and lnr. and tstd. S.O.&S.W.; T. tbg. and lnr. and tstd. S.O.&S.W.; pmpd. S.O. and much S.W.; pmpd. off approx. 10 B.O.; did not shoot with nitro; bailing; S.O.&wtr.; T.D. 330 ft.; S.D.; W.O.

Sabine Parish

Geo. Ellis No. 1 Walker, 500 ft. NW cor. NW SE Sec. 8-4-12. Set 12½-in. csg. 276 ft.; reported S.O. 2,180 ft. and 2,263-65 ft.; rng. csg. 2,269 ft.; cd. sdy. sh. 2,265-69 ft.; set 7-in. csg. 2,250 ft.; drld. plug; T.D. 2,271 ft.; tstd. S.W.; W.O.

Potter et al No. 1 Ebarb, NE cor. SE Sec. 4-7-13. Set 6-in. csg. 2,038 ft.

W. M. Quick No. 1 Sabine, SE cor. NE NE Sec. 8-7-13. Drlg. 172 ft.

Sklar & Major Oil Co. No. 1 Sabine, 440 ft. S, 990 ft. W, NE cor. SE NE Sec. 7-7-11. T.D. 2,418 ft.; tstd. S.W.; W.O.

C. H. Smith Sabine Lbr. Co., NE cor. NW NW Sec. 9-7-13. Rng. 7-in. csg.; tstd. S.W. in 2-ft. sd. 2,472-74 ft.; P.B. 2,030 ft.; W.O.C.

H. M. Sneed No. 1 Leone, SW cor. NW SE Sec. 8-7-13. Drlg. sh. 2,120 ft.

Jeff Spier No. 1 Remedes, SE cor. NW NW Sec. 12-7-13. Set 6-in. csg. 2,168 ft. W.O.S.R.

Sutton Zwolle Oil Co. No. 3 Bowman Hicks, 330 ft. SW cor. SW NW Sec. 18-7-13. Tstd. S.W. with S.O. 2,282 ft.; drlg. ch. rk. 2,516 ft.

Union Parish

Standard Oil Co. of La. and Joe Modisett No. 1-B Frost Lbr. Ind., Sec. 14-23n-2w. Cd. 6,910-24 ft.; rec. 12½ ft. sd. and strks. sh.; no show; set 9⅝-in. csg. 4,508 ft.; cd. 7,008-16 ft., hd. sd. &sh.; hd. sdy. L. to 7,084 ft.; cd. 7,128 ft.; cross bedded gr. shly. sd.; drlg. sd. &sh. 8,085 ft.

Webster Parish

Hunt Oil Co. No. 30 Hope, 100 ft. W, C NE SW Sec. 30-21-10. Drlg. 2,717 ft.

Hunt Oil Co. and Magnolia Pet. Co. No. 1 Gray-Cox, SW cor. Sec. 19-21-9. Drlg. sh.&L. 5,965 ft.

Hunt Oil Co. No. 1 Miller, 100 ft. N, C NW NE Sec. 4-20-10. Drlg. sdy. sh. 8,498 ft.

Hunt Oil Co. No. 1 Stewart, NW SE Sec. 32-21-10. Set 9⅝-in. 5,672 ft.; drlg. sh. 7,110 ft.

Magnolia Pet. Co. No. 1 Roseberry Unit, 20 ft. N and W, C SE Sec. 29-23-9. Used 750 gal. acd. and flwd. and swbd. 83 B.P.D.; T.D. 9,250 ft.; O.T.D. 9,380 ft.; flwd. 31 bbls. in 5½ hrs.; 3 heads; through 1-in. ck.; pulled 2½-in. tbg. and ran 2-in. tbg.; flwd. 50 B.P.D. by heads; went in to shoot with 65 qts. nitro at 9,250 ft.; went off at 8,350 ft.; C.O. hole; T.D. 9,250 ft.; P.B. 8,318 ft. and perf. Bodcw. sd. 8,292-8,305 ft.; tstd. S.W.; W.O.

Oliphant Oil Co. No. 2-A Stewart et al, SW cor. Sec. 33-21-10. T. "D" sd. 8,476 ft.; S.O.; cg. 8,515 ft.

Union Prod. Co. No. 1 Walker Unit, 50 ft. S, C SE Sec. 30-18-8. Set 9⅝-in. csg. 6,490 ft.; T. Pettit 6,665 ft.; T. Tr. Pk. 6,910 ft.; S.D. 9,917 ft.; repairs.

Woodley Pet. Co. No. 1-B R. R. Cox, 660 ft. SW cor. Sec. 33-21-10. O.W.D.D.; O.T.D. 4,695 ft.; set csg. 5,663 ft.; W.O.C.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Alfred Boudoin, Sec. 58-12s-3e. Drlg.

Continental Oil Co. No. 1 Franciol, Sec. 67-12s-3e. Drlg.

Continental Oil Co. No. 1 Lucion Duhon, Sec. 17-12s-3e. Drlg. sh. 10,338 ft.

Stanolind O. & G. Co. No. 1 Blanchet, Sec. 67-12s-3e. Drlg. sd. 7,548 ft.

Bancroft—Beauregard Parish

Republic Prod. Co. No. 8 Columbia Ld. & Tbr. Co., Sec. 15-6s-13w. T.D. 7,336 ft.; comp.; no ga.

Republic Prod. Co. No. 4 Lutcher Moore Lbr. Co., Sec. 16-6s-13w. W.O. rig.

Republic Prod. Co. No. 6 Lutcher Moore Lbr. Co., Sec. 15-6s-13w. T.D. 7,370 ft.; I.P. 300 B.P.D.; ¼-in. ck.

Republic Prod. Co. No. 7 Lutcher Moore, Sec. 14-6s-13w. Drlg. sh. 6,119 ft.

Bateman Lake—St. Mary Parish

Texas Co. No. 2 State-Bateman Lake, Sec. 21-16s-12e. 13⅜-in. csg. 1,700 ft.; T.D. 9,453 ft.; sdtrkd. 6,880 ft.; drld. into old hole; P.B. 6,580 ft.; sdtrkd.; drlg. ahead.

Texas Co. No. 2 Wax Bayou Co., Sec. 21-16s-12e. T.D. 10,876 ft.; I.P. 325 B. P.D.; 10/64-in. ck.

Baton Rouge—East Baton Rouge Parish

W. V. Bowles No. 1 Richard Community, Sec. 46-7s-1e. R.U.

Geo. Echols No. 1 Evans Duplantier, Sec. 68-7s-1w. Drlg. 100 ft.

Guaranty Oil Co. No. 1 D. J. Morgan, 9⅝-in. csg. 1,169 ft.; T.D. 3,708 ft.; P. B. to 2,065 ft. to strghtn. hole; sdtrkd.; T.D. 6,539 ft.; P.B. to sdtrk.

Geo. Helis et al No. 1 Haase Community, Sec. 64-7s-1e. Drlg. sh. 1,600 ft.

Wm. Helis No. 1-D Duplantier, Sec. 66-7s-1w. Drk.

Lisbon-Iberia Oil Co. No. 1 D. A. Duplanter, Sec. 66-7s-1w. T.D. 6,472 ft.; 7-in. csg. 6,452 ft.; I.P. 438 B.P.D.; ¼-in. ck.; T.P. 1,000 lb.

Lisbon-Iberia Oil Co. No. 2 Duplantier, Sec. 66-7s-1e. Loc.

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 3-B State-Bay, Sec. 13-22s-17e. Drlg. sh. 7,123 ft.

Texas Co. No. 19 State-Bay St. Elaine, Sec. 18-22s-18e. Loc.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 11 Wilberts, Sec. 67-9s-11e. Loc.

Bayou des Allemands—St. Charles Parish

Amerada Pet. Corp. No. 4 St. Charles Ld. Co., Sec. 13-15s-2e. Loc.

De Large—Terrebonne Parish

Fohs Oil Co. No. 1 Buckley-Mahler, Sec. 25-19s-16e. 13⅜-in. csg. 3,380 ft.; T.D. 10,211 ft.; 9⅝-in. csg. 10,058 ft.; drlg. sh. 10,562 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 1-B State-Caillou Island, Sec. 19-23s-20e. T.D. 5,522 ft.; run csg.

Texas Co. No. 29 State, Sec. 17-23s-20e. Rig.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 26 Sch. Ld., Sec. 16-14s-13w. T.D. 2,465 ft.; 13⅜-in. csg. 2,465 ft.; T.D. 6,564 ft.; P.B. sdtrkd.; T. salt 8,059 ft.; T.D. 8,065 ft.; P.B. to 2,485 ft.; sdtrkd.; drlg. sh. 5,386 ft.

Magnolia Pet. Co. No. 24 Cameron Meadows Ld. Co., Sec. 21-14s-13w. Drlg. sh. 4,210 ft.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 1 Cypress, Sec. 75-15s-15e. Dredge canal.

Sun Oil Co. No. 4 Delbert Stark and Brown Cypress Co., Sec. 70-15s-15e. T.D. 7,794 ft.; P.B. 6,764 ft.; sdtrkd.; T.D. 8,268 ft.; stk. D.S.; shot at 8,195 ft.; P.B. 7,642 ft.; sdtrkd. 7,642 ft.; T. D. 8,260 ft.; 9⅝-in. csg. 8,260 ft.; T.D. 8,292 ft.; cleaned hole; found csg. collapsed; recmtd. csg.; rmg. 7,176 ft.; found leak in csg.; recmtd.; P.B. 7,969 ft.; sdtrkd.; drlg. sh. 7,969 ft.

Sun Oil Co. No. 1 Dodge, Sundberry & Latham, Sec. 65-15s-15e. T.D. 3,222 ft.; cap rk.; abd.

Chalkley Field—Cameron Parish

Humble O. & R. Co. No. 2 Sweet Lake Ld. & Oil Co., Sec. 8-12s-6w. T.D. 8,614 ft.; 7-in. csg. 8,608 ft.

Shell Pet. Corp. No. 1-A Katherine Bel Hanzen, Sec. 15-12s-6w. T.D. 9,500 ft.; fsg.

Charenton—St. Mary Parish

Commerce Oil Co. No. 1 T. Brulation, Sec. 19-13s-10e. Drlg. sh. 7,039 ft.

Pan American Prod. Co. No. 1 Achee, Sec. 21-13s-9e. Loc.

Pan American Prod. Co. No. 13 Lawa Realty Co., Sec. 30-13s-10e. T.D. 7,212 ft.; 5½-in. csg. 7,213 ft.; fsg.

Pan American Prod. Co. No. 14 Lawa Realty Co., Sec. 30-13s-10e. T.D. 7,405 ft.; P.B. 6,950 ft.; sdtrkd.; drlg. sh. 7,315 ft.

Pan American Prod. Co. No. 5 South Coast, Sec. 30-13s-10e. Drlg. sh. 6,635 ft.

Pan American Prod. Co. No. 13 Veeder, Sec. 30-13s-10e. T.D. 2,587 ft.; 7-in. csg. 2,580 ft.; I.P. 215 B.P.D.; ¾-in. ck.

Pan American Prod. Co. No. 14 Veeder, Sec. 11-13s-9e. T.D. 3,020 ft.; P.B. 1,053 ft.; rmg.

Convent—St. James Parish

Continental Oil Co. No. 2 Realty Operators, Inc., Sec. 16, 13⅜-in. csg. 1,492 ft.; T.D. 7,889 ft.; P.B. 7,275 ft.; sdtrkd. 7,305 ft.; T.D. 8,235 ft.; well blew out; caught fire; cleaned hole to 4,866 ft.; P.B. 2,502 ft.; sdtrkd.; drlg. sh. 7,967 ft.

Creole—Cameron Parish

Superior Oil Co. No. 6 State-Gulf of Mexico. T.D. 5,986 ft.; P.B.; sdtrkd.; T.D. 7,200 ft.; P.B.; sdtrkd. 1,175 ft.; drlg. sh. 6,365 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 21 Community, Sec. 31-10s-2e. 5½-in. csg. 6,404 ft.; T. salt 6,721 ft.; T.D. 6,723 ft.; abd.
Humble O. & R. Co. No. 22 Community, Sec. 32-10s-2e. Drk.
Humble O. & R. Co. No. 5 Landry, Sec. 34-10s-2e. Drk.
Kiva Oil Co. No. 1 Duplessis, Sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 9 State, Sec. 5-22s-16e. Drlg. sh.&L. 7,312 ft.

Eola—Avoyelles Parish

Amerada Pet. Corp. No. 1 Avoyelles Bnk. & Tr. Co., Sec. 5-2s-3e. Bldg. rd.
Amerada Pet. Corp. No. 1 Mrs. C. B. Machine, Sec. 6-2s-3e. Drlg. sh. 7,045 ft.
Amerada Pet. Corp. No. 2 Mrs. C. B. Machine, Sec. 6-2s-3e. Drlg. sh. 8,215 ft.
Amerada Pet. Corp. No. 1 Merchants & Planters Bnk., Sec. 41-1s-3e. Loc.
Gulf Expln. Co. No. 1 Samuel Haas Est., Sec. 8-2s-3e. T.D. 7,006 ft.; P.B. 6,450 ft.; crooked hole.
Sid Richardson No. 5 Haas Inv. Co., Sec. 5-2s-3e. Drlg. sh. 5,036 ft.
Sid Richardson No. 1 S. S. Pierce, Sec. 6-2s-3e. Drlg. sh. 4,769 ft.
Sid Richardson No. 1 State Bayou, Sec. 7-7s-2e. Cg. 8,423 ft.
Sid Richardson No. 2 State Bayou Boenf, Sec. 7-2s-3e. Drive piling.
Sun Oil Co. No. 1 E. A. Townsend, Sec. 8-2s-2e. Reported to cut 110-ft. fault at 3,950 ft.; T.D. 8,568 ft.; 7-in. csg. 8,568 ft.; perf. csg. 8,540-67 ft.; I.P. 152 B.P.D.; ¼-in. ck.

Garden Island—Plaquemines Parish

Texas Co. No. 34 State, Sec. 38-23s-33e. Drlg. sh. 1,155 ft.

Gibson—Terrebonne Parish

Shell Pet. Corp. No. 3 R.E.K., Sec. 40-17s-15e. T.D. 10,200 ft.; P.B. 8,657 ft.; perf. csg. 8,639-42 ft.; tstd. 500 lb. press.; pulling tstg. tool.

Gillis—Calcasieu Parish

Union Sulphur Co. No. 8 Kaufman, Sec. 7-9s-8w. T.D. 7,956 ft.; sdtrkd.; T.D. 6,-957 ft.; 5-in. csg. 6,949 ft.; drld. out 6,957 ft.; swbd. oil; well went dead; pulled screen to retest.

Golden Meadows—La Fourche Parish

Geo. Lilly et al No. 1 Jack Collins, Sec. 12-19s-22e. Drlg. sh. 3,796 ft.
M. H. Marr and G. H. Vaughn No. 1 B. & D. Unit, Sec. 12-19s-22e. 10¾-in. csg. 2,301 ft.
Martex Pet. Corp. No. 1 Falgout Holding Co., Inc., Sec. 9-19s-22e. Cd. sh.& sd.; O.S. 2,636-45 ft. and oil sd. 2,645-54 ft.; drlg. sh. 7,295 ft.; rec. 36 stands 42-gr. oil; D.S.T. 7,121-7,202 ft. cd. oil sd. 7,919-64 ft.; cd. S.W. sd. 7,-965 ft.; run 7-in. csg.; T.D. 8,524 ft. (corrected); 7-in. csg. 8,524 ft.; perf. csg. 8,163-75 ft.; dropped tbg. in hole; fsg.; P.B. 7,975 ft.; perf. csg. 7,925-55 ft.; 120 holes; I.P. 250 B.P.D.; ¼-in. ck.; gr. 39.5; well began making sd.; killed to W.O.
Martex Pet. Corp. No. 2 Falgout Holding Co., Sec. 9-19s-22e. Loc.
Texas Co. No. 2 State-Catfish Lake, Sec. 3-20s-21e. Loc.
Texas Co. No. 3 State-Catfish Lake, Sec. 76-19s-21e. Loc.

Grand Bay—Plaquemines Parish

Gulf Oil Corp. No. 4 Grand Prairie Lve. Dist., Sec. 48-20s-18e. Drlg. sh. 8,762 ft.
Gulf Oil Corp. No. 6-A Grand Prairie Lv. Dist., Sec. 17-20s-19e. Dredge canal.
Gulf Oil Corp. No. 2 State, Sec. 6-20s-19e. T.D. 9,071 ft.; run 9⅝-in. csg.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 25-A Erwin, Sec. 13-12s-10w. Drk.
Stanolind O. & G. Co. No. 28-A Gulf fee, Sec. 30-12s-10w. Drlg. sd. 5,035 ft.
Superior Oil Co. No. 1 Kaough, Sec. 31-12s-10w. T.D. 7,529 ft.; sdtrkd.; drlg. 6,680 ft.
Texas Co. No. 26 State, Twp. 12s-9w. Drlg. sh. 2,800 ft.
Union Sulphur Co. No. 8 Caldwell, Sec. 37-2s-10w. Drlg. sdy. sh. 6,435 ft.
Union Sulphur Co. No. 12 Doiron, Sec. 37-12s-10w. T.D. 8,064 ft.; P.B.; sdtrkd.; drlg. sh. 4,500 ft.
Union Sulphur Co. No. 13 Doiron, Sec. 27-12s-10w. S.D. 5,221 ft.
Union Sulphur Co. No. 1 Josephine O'Quinn, Sec. 37-12s-10w. T.D. 6,927 ft.; sdtrkd.; 7-in. csg. 8,014 ft.; drlg. sh. 8,247 ft.

Horseshoe Bayou

Texas Co. No. 2 St. Mary Parish Ld. Co., Sec. 37-17s-9e. Drlg. sh. 4,012 ft.

Jefferson Island—Iberia Parish

Phillips Pet. Co. No. 1 Breaux, Sec. 41-12s-5e. Drlg. sh. 4,529 ft.
Texas Co. No. 2 Jefferson Island, Sec. 58-12-5e. 18⅝-in. csg. 40 ft.; 7⅝-in. csg. 8,451 ft.; T. salt 9,444 ft.; T.D. 9,458 ft.; perf. csg. 8,682-92 ft.; making 90 bbls. net oil, 227 bbls. S.W.; ⅛-in. ck.; P.B. 8,700 ft.; perf. csg. 8,-682-92 ft.; flwd. oil and S.W.; made sqze. job; W.O.C.
Texas Co. No. 2 State-Lake Peigneur, Twp. 12s-5w. T. salt 7,419 ft.; T.D. 7,-437 ft.; P.B. 6,292 ft.; P.B. and sidetracked; drlg. sh. 6,920 ft.

Jennings—Acadia Parish

Glassell & Glassell No. 7 McFarlain, Sec. 41-9s-2w. T.D. 8,425 ft.; tstg.

Gulf Oil Corp. No. 41 Arnaudet, Sec. 47-9s-2w. 9⅝-in. csg. 4,557 ft.; drlg. sh. &sd. 6,635 ft.
Shell Oil Co., Inc., No. 6 Conover, Sec. 40-17s-15e. P.B. 7,200 ft.; flwd. 160 B.P. D.; 14/64-in. ck.
Shell Oil Co., Inc., No. 7 Conover, Sec. 40-9s-2w. Loc.
Stanolind O. & G. Co. No. 114 Crowley Oil & Mineral Co., Sec. 48-9s-2w. T.D. 3,755 ft.; P.B. 1,293 ft.; P.B. 1,900 ft.; sdtrkd.; drlg. 4,581 ft.

Lafitte—Jefferson Parish

Texas Co. No. 2 Sch. Bd., Sec. 20-17s-24e. T.D. 6,601 ft.; sdtrkd. 6,375 ft.; went back into old hole; trying to sdtrk. at 6,387 ft.; drlg. sdy. sh.&L. 9,249 ft.
Texas Co. No. 2 State-Bayou Norman, Sec. 21-17s-24e. 10¾-in. csg. 1,942 ft. drlg. sh.&L. 8,905 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 43 State, Sec. 30-21s-20e. T.D. 4,122 ft.; P.B.; sdtrkd.; drlg. wtr. sd. 4,446 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 10 La Fourche Basin Levee Dist., Sec. 2-18s-25e. Drlg. sh. 78 ft.

Lake Long—La Fourche Parish

Fohs Oil Co. No. 8 State, Sec. 17s-19e. T.D. 9,600 ft.; P.B. 9,034 ft.; sdtrkd. at 9,034 ft.; drlg. sh. 10,181 ft.

Lake Mongoulois—St. Martin Parish

Texas Co. No. 7 State, Sec. 10-10s-9e. Drlg. sh. 3,036 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 25 State, Sec. 18-23s-18e. Drlg. sh. 5,110 ft.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 W. E. Mont, Sec. 32-19s-19e. Loc.
Humble O. & R. Co. No. 1 C. P. Smith, Sec. 53-19s-19e. Drlg. sh. 11,131 ft.
Humble O. & R. Co. No. 2 La Terre Ld. Co., Sec. 32-19s-19e. Loc.

New Iberia—Iberia Parish

Lisbon-Iberia Oil Corp. No. 7 Gulf fee, Sec. 25-12s-7e. T.D. 5,939 ft.; P.B.; sdtrkd.; T.D. 6,019 ft.; P.B. 3,738 ft.; W.O.C.; no report.
Texas Co. No. 2 Bryant, Sec. 25-12s-7e. R.U.
Texas Co. No. 2-A Hanzon, Sec. 54-12s-7e. 7⅝-in. csg. 8,075 ft.; S.D. 8,801 ft.; heaving sh.; P.B. 8,065 ft.; P.B. to sidetrack 7,071 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 4 Davis, Sec. 45-8s-1e. T.D. 8,180 ft.; oil sd. 8,169-80 ft.; I.P. 600 B.P.D.; ¼-in. ck.
Humble O. & R. Co. No. 4 H. J. Habetz, Sec. 45-8s-1e. 10¾-in. csg. 2,017 ft.

North Tepetate—Acadia Parish

St. Mary Oil Co. No. 1 Dr. H. Jenkins, Sec. 12-7s-2w. Drk.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 3 Haas & Hirsch, Sec. 4-6s-5e. Drlg. sh. 1,635 ft.
Smith & McDannald No. 1 S. W. Futral, Sec. 20-6s-5e. Drlg. sh. 4,165 ft.
Y. D. Spill No. 1 Gaudet, Sec. 4-6s-5e. S.D. 4,700 ft.
Western Gulf Prod. Co. No. 1 Watkins, Sec. 4-6s-5e. R.U.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 39 Orleans Lve. Bd., Sec. 13-8s-15e. 16-in. csg. 244 ft.; drlg. sd.&sh. 2,480 ft.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 10 State QQ, Sec. 17-19s-17e. Drlg. sh. 5,587 ft.
Gulf Oil Corp. No. 3-A Orleans Lve. Bd., Sec. 7-19s-17e. Drlg. sdy. sh. 7,967 ft.
Gulf Oil Corp. No. 2-A Plaquemines Ld. Co., Sec. 7-19s-17e. 13⅜-in. csg. 1,524 ft.; drlg. sh. 8,050 ft.
Gulf Ref. Co. No. 5 State, Sec. 17-19s-17e. Loc.
Gulf Oil Corp. No. 9 State QQ, Sec. 18-19s-17e. Loc.

Raceland—La Fourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., Sec. 34-15s-19e. 18⅝-in. 11,312 ft.; T.A.
Amerada Pet. Corp. No. 4 South Coast Corp., Sec. 34-15s-19e. 18⅝-in. csg. 239 ft.; cg. sd.&sh. 10,169 ft.
Tide Water Asso. Oil Co. No. 2-A South Coast Corp., Sec. 34-15s-19e. Cg. sd.& sh. 10,169 ft.

Roanoke—Jeff Davis Parish

Humble O. & R. Co. No. 6 J. W. Devillbiss, Sec. 14-9s-4w. Cd. at 4,195-98½ ft.; T.D. 4,238 ft.; 7-in. csg. 4,237 ft.; perf. csg. 4,201-04 ft.; swbd. S.W.; drlg. sh. 4,315 ft.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 16 United Ld. Co., Sec. 15-10s-4e. Bldg. drk.
Sorrento Synd. No. 1 L. L. Bernard, Sec. 27-10s-4e. R.U.

South Houma—Terrebonne Parish

Shell Pet. Corp. No. 3 Peters. Drlg. sh. 9,377 ft.

South Roanoke—Jeff Davis Parish

Continental Oil Co. No. 1 Calcasieu Natl. Bnk., Sec. 36-10s-4w. Drlg. sh. 9,431 ft.

Valentine—La Fourche Parish

T. G. Markley and Mohawk Oil Corp. No. 1 Deusson Hrs., Sec. 100-17s-20e. T.D. 6,905 ft.; fsg.
Pan American Prod. Co. No. 20 Harang, Sec. 8-17s-20e. T.D. 4,608 ft.; D.S. stk.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co. No. 5 Buras Lv. Bd., Sec. 23-21s-30e. Drlg. sdy. sh. 5,084 ft.
Tide Water Asso. Oil Co. No. 10 Manhattan Ld. & Fruit Co., Sec. 26-21s-30e. Dredge canal.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 2 Fontenot-Ladeau, Sec. 45-3s-2e. Drlg. sh. 8,795 ft.
Continental Oil Co. No. 3 Haas, Sec. 44-3s-2e. Drlg. sh. 10,200 ft.; no report.
Continental Oil Co. No. 3 Ludeau-Haas, Sec. 44-3s-2e. Drlg. sh. 6,823 ft.
Continental Oil Co. No. 2 Orise Deville, Sec. 46-3s-2e. Drlg. 4,771 ft.
Continental Oil Co. No. 3 Orise Deville, Sec. 46-3s-2e. Drk.
Continental Oil Co. Sec. 44-3s-2e. Loc.
Texas Co. No. 3 Marman fee, Sec. 45-3s-2e. T.D. 9,047 ft.; tstd. oil and S.W.; pulling screen and lnr.

Vinton—Calcasieu Parish

R. & R. Oil Co. No. 2 Vincent, Sec. 34-10s-12w. T.D. 2,343 ft.; run 7-in. csg.; no report.

West Lake Verret—St. Mary Parish

Shell Oil Co., Inc., No. 3 Jeanerette Lbr. Co. Dirg. 114 ft.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 5 Calcasieu Natl. Bnk., Sec. 12-9s-6w. Drlg. sh. 3,215 ft.
Union Sulphur Co. No. 1 Raymond Hebert, Sec. 6-9s-5w. R.U.
Union Sulphur Co. No. 1 M. F. Johnson, Sec. 12-9s-6w. Drlg. 6,475 ft.
Union Sulphur Co. No. 3 Mrs. O'Miller, Sec. 7-9s-5w. Drk.
Union Sulphur Co. No. 2 Osmon, Sec. 7-9s-5w. T.D. 9,111 ft.; P.B. 5,910 ft.; sdtrkd.; T.D. 9,460 ft.; run csg.

S. LOUISIANA WILDCATS

Acadia Parish

T. T. Tolson et al No. 1 J. Turner, Sec. 25-7s-1e. Drlg. sh. 1,481 ft.
Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. M.I. rig.

Allen Parish

Bel Oil Corp. No. 1 J. A. Bel, Sec. 22-6s-3w. Cd. gas sd. 6,257-87 ft.; S.W. sd. 6,287-97 ft.; T.D. 9,010 ft.; run 7-in. csg. 8,595 ft.; perf. csg. 8,549-52 ft.; tstd. 40 lbs. press.; rec. 18 stands S. W., drlg. mud cut with gas and dist. perf. csg. 6,917-19 ft.; tstd. S.W.; P.B. 6,004 ft.; perf. csg. 6,041-50 ft.; rec. 3 stands oil, 15 stands of oil and gas-cut mud showing S.W.; sqzd. perf.; W. O.C.

Assumption Parish

Shell Oil Co. No. 1 Ellis, Sec. 66-16s-14e. Drlg. 8,000 ft.

Beauregard Parish

Atlantic Ref. Co. No. 1 Lutcher Moore, Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1 Rice Ld. & Lbr. Co., Sec. 22-3s-11w. Loc.
Atlantic Ref. Co. No. 1-A Rice Ld. & Lbr. Co., Sec. 22-3s-11w. Drlg. sh. 6,175 ft.
Standard Oil Co. of Calif. No. 1 Long Bell Lbr. Co., Sec. 23-4s-9w. T. Cckfld. 6,949 ft.; drlg. sh. 7,773 ft.

Calcasieu Parish

Humble O. & R. Co. No. 1 Edgewood Ld. & Logging Co., Sec. 32-7s-10w. Drlg. sh. 3,152 ft.
Union Sulphur Co. No. 2 Drew Manuel Training Sch., Sec. 17-10s-11w. Drlg. sh. 3,615 ft.

Cameron Parish

Union Sulphur Co. No. 1 Sweet Lake Ld. Co., Sec. 9-12s-7w. Drlg. sh.&L. 9,395 ft.

East Baton Rouge Parish

Danciger O. & R. Co. No. 1 D. E. McInnis, Sec. 58-7s-1e. Bldg. road.

Evangeline Parish

Continental Oil Co. et al No. 1 Mrs. Lillie Manuel, Sec. 33-4s-1w. T. Vicksburg 7,740 ft.; drlg. sh. 9,579 ft.

Iberia Parish

Texas Co. No. 3-B State-Vermilion Bay, Twp. 16s-5e. T. salt 5,970 ft.; B. salt 7,540 ft.; T.D. 7,714 ft.; 9⅝-in. csg. 7,-705 ft.; drlg. sh.&L. 8,510 ft.

Iberville Parish

Housh & Thompson No. 1 Kessler & Folse, Sec. 40-11s-13e. Cg. sd. 7,850 ft.
Shell Oil Co., Inc., No. 1 Natalbany Lbr. Co., Sec. 18-9s-2e (tight well). T.D. 10,-524 ft.; P.B. 9,100 ft.; perf. csg. 9,070-75 ft.; swbg.

Jeff Davis Parish

R. M. Bleakie et al No. 1 Lack-Moore Co., Ltd., Sec. 29-7s-6w. 13⅜-in. csg. 65 ft.; prep. to res. operations.
Stanolind O. & G. Co. No. 3-B Ervin & Bishop, Lot 15, Sec. 7-9s-5w. Drk.
Union Sulphur Co. No. 1 H. B. Tietje, Sec. 36-7s-4w. T.D. 9,220 ft.; 7-in. csg. 8,227 ft.

La Fourche Parish

Gulf Oil Corp. No. 1 Grandison Ld. Co., Sec. 14-20s-23e. T.D. 8,241 ft.; 9⅝-in. csg. 8,241 ft.; cg. sh.&shls. 10,341 ft.
J. Perry Scranton No. 2 Martinez, Sec. 132-15s-17e. Drlg. sh. 1,640 ft.
Texas Co. No. 1 L.L.&E. Golden Meadows, Sec. 77-19s-21e. 9⅝-in. csg. 10,-744 ft.; T.D. 12,526 ft.; P.B. 11,810 ft.; made sqze. job; perf. csg. 10,769-71 ft.; tstd. S.W.; P.B. 10,269 ft.; stk. D.S.; drlg. on junk.

Orleans Parish

W. T. Burton No. 3-B Faubourg de Montluzin, Sec. 1-11s-13e. R.U.
W. T. Buton No. 1 L.&N.R.R., Sec. 18-11s-15e. T.D. 9,000 ft.; 7⅝-in. csg. 8,-820 ft.; pmpg. in mud; losing returns.
W. T. Burton No. 3 L.&N.R.R., Sec. 25-11s-14e. Loc.
W. T. Burton No. 2 State-Lake Pontchartrain, Twp. 10s-10e. Loc.

Plaquemines Parish

Gulf Oil Corp. No. 8 State P.P., Sec. 18-23s-31e. Loc.
Texas Co. No. 1 L.L.&E., Bastian Bay, Sec. 43-20s-28e. 9⅝-in. csg. 9,540 ft.; T.D. 10,662 ft.; P.B. 9,900 ft.; sdtrkd. 9,895 ft.; drlg. sh. 11,333 ft.

Rapides Parish

Gulf States Expln. Co. No. 1 Jack Cappel, Sec. 37-4n-4w. Drlg. sh. 4,380 ft.

St. Bernard Parish

Carter, Molero & Brian, Sec. 129-14s-14e. Drk.
Gulf Ref. Co. No. 4-State-R.R. (Lake Borgne), Twp. 12s-15e. 9⅝-in. csg. 8,-161 ft.; T.D. 10,632 ft.; P.B. 9,700 ft.; rmd. to 9,658 ft.; lost core bbl.; P.B. sdtrkd. 8912 ft.; T.D. 10,528 ft.; 7-in. csg. 10,494 ft.; fsg.
Vendome Pet. Co. No. 2 Kenilworth Plantation, Sec. 59-13s-14e. Drlg. sd. 810 ft.

St. Charles Parish

Texas Co. No. 1 L.L.&E. Paradis, Sec. 39-14s-20e. 9⅝-in. csg. 8,975 ft.; T.D. 10,787 ft.; twisted off D.S.; fsg.; C.O. hole 10,200 ft.; 7-in. csg. 10,177 ft.; perf. csg. 10,060-70 ft.; tstd. gas; sqzd. perf.; perf. csg. 9,84-50 ft.; tstd. 2,000 lb. press.; flwd. est. 5 bbl. dist. per hr.; prep. to perf. csg. 9,820-30 ft.

St. James Parish

Shell Pet. Corp. No. 1 Shexnayder, Sec. 38-12s-15e. 9⅝-in. csg. 8,534 ft.; T.D. 11,002 ft.; 7-in. csg. 11,002 ft.; P.B. 10,943 ft.; perf. csg. 10,928-40 ft.; flwd. 12 bbls. dist.; 4 hrs.; 11/64-in. ck.; T.P. 4,500 lbs.; C.P. 4,600 lbs.; killed; drlg. sh. 11,314 ft.

St. Martin Parish

Roper & Todd No. 1 Levert Plantation, Lot 40, Sec. 42-10s-7e. T.D. 9,029 ft.; abd.
Texas Co. No. 12 St. Martin, Sec. 21-8s-7e. Drlg. sh. 2,730 ft.

St. Tammany Parish

Honey Island Dev. Corp. No. 1 W. C. Forbes, Sec. 33-7s-15e. T.D. 100 ft.; 20-in. csg. 87 ft.

Terrebonne Parish

Texas Co. No. 1 Continental Ld. & Fur Co., Sec. 29-18s-14e. O.W.D.D.; T.D. 12,483 ft.; prep. to test 9,765-82 ft.; perf. csg. 9,680 ft.; tstd. S.W. on D.S. T.; P.B. 9,590 ft.; perf. csg. 9,558-70 ft.; tstd. S.W.
Texas Co. No. 2 State-Coon Point, Twp. 23s-14e. 13⅜-in. csg. 1,900 ft.; drlg. sdy. sh. 6,696 ft.

Vermilion Parish

La. Ld. & Expln. Co. No. 1 La. Fur. Co., Sec. 21-15s-1e. Drlg. sh. 6,786 ft.

Vernon Parish

W. T. Burton No. 1 W. T. Burton Mineral fee, Sec. 32-1n-6w. Drlg. sh. 1,150 ft.

West Feliciana Parish

McKay et al No. 1 James Montgomery. Loc.

TEXAS

Week Ending May 27

GULF COAST FIELDS

Old Ocean—Brazoria County

Harrison & Abercrombie No. 2 Larsen et al, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; drlg. sh. 7,212 ft.
Harrison & Abercrombie No. 1 C. W. Markle, Polly & Chance Sur. 9⅝-in. csg. 7,016 ft.; cg. sh.&sd. 10,267 ft.
Harrison & Abercrombie No. 2 Osburn, C. Breen Sur. Drlg. sh. 2,030 ft.
Mid-Continent Pet. Corp. No. 1 Wm. Chenault, C. Breen Sur. Loc.

Sun Oil Co. No. 1 Borsodi-Elkins, C. Breen Sur. 18⅝-in. csg. 121 ft.; 9⅝-in. csg. 7,010 ft.; cg. sd.&sh. 9,936 ft.
Sun Oil Co. No. 3 Campbell, C. Breen Sur. Loc.

Cedar Point—Chambers County

Standard Oil Co. of Calif. et al No. 46-120 State. Loc.

West Columbia—Brazoria County

Texas Co. No. 32 Abrams, G. Tennille Sur. 10-in. csg. 1,170 ft.; drlg. L. 3,-186 ft.
Texas Co. No. 5 Goldman, G. Tennille Sur. T.D. 4,381 ft.; cutting and pulling D.P.; cleaned hole to 3,029 ft.; prep. to sdtrk.; drlg. sh.&L. in sdtrkd. 7⅝-in. csg. 4,309 ft.; drlg. L. 4,920 ft.

Thompson—Fort Bend County

H. M. Naylor No. 1 W. L. Moody, H. Chrisman Sur. Drlg. sh. 4,167 ft.
H. M. Naylor No. 2 Musselman, H. Chrisman Sur. Cd. sd.&sh. S.O. 7,708-68 ft.; 5½-in. csg. 7,700 ft.
H. M. Naylor No. 4 Musselman, H. Chrisman Sur. Bldg. rd.
H. M. Naylor No. 5 Musselman, H. Chrisman Sur. Bldg. rd.

Dickinson—Galveston County

Pure Oil Co. No. 1 Franz Kohfeldt et al, T. W. Johnson Sur. Drlg. sh. 7,726 ft.

League City—Galveston County

Phillips Pet. Co. No. 1 Bryan, Perry & Austin Sur. R.U.&S.D.
Phillips Pet. Co. No. 1 Esperson-Phillips, S. F. Austin Sur. Drlg. 1,215 ft.
Phillips Pet. Co. No. 4 Lobit, Perry & Austin Sur. Drlg. sh. 2,637 ft.
Phillips Pet. Co. No. 2 Stewart Title Co., S. F. Austin Sur. Drlg. sh. 7,036 ft.
Salt Dome Oil Corp. No. 3 Ross-Stewart, Perry & Austin Sur. 10¾-in. csg. 3,-100 ft.; T.D. 9,000 ft.; 5½-in. csg. on bttm.; tstg.
West Prod. Co. No. 1 fee, Lot 2, Blk. 5, Perry & Austin Sur. Loc.

Aldine—Harris County

Earl Hankamer No. 1 W. B. Rowland, Lots 42 and 43, E. Farias Sur. R.U.
Texas Gulf Prod. Co. No. 10 P. Hairgrave, S. L. Noble Sur. Drlg. sh. 6,880 ft.
Texas Gulf Prod. Co. et al No. 10 D. Heath, W.C.R.R. Sur. No. 2. Drlg. sh. 6,212 ft.

Clear Lake—Harris County

Humble O. & R. Co. No. 8-C Humble-West, Wm. Dobie Sur. T.D. 5,834 ft.; set 5½-in. csg. on bttm.; tstg.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Edwards, Reels & Trobough Sur. Drk.

Eureka—Harris County

Jack Frazier No. 1 W. T. Helberg, H. Reinerman Sur. R.U.
J. Frazier No. 7 Hogg Bros., J. Reinerman Sur. M.I.M.
J. W. Frazier No. 3 Lena Dunn, H. Reinerman Sur. 10¾-in. csg. 2,509 ft.; T.D. 8,111 ft.; perf. csg. 7,696-7,700 ft.; tstg.
Houston Oil Co. No. 3 Helberg & Lackner, J. Reinerman Sur. Loc.
Means & McGehee No. 1-F Laura Lackner, Drk.
Tide Water Asso. Oil Co. No. 2-B Lackner, H. Reinerman Sur. Drlg. sh. 1,-836 ft.

Fairbanks—Harris County

Sinclair Prairie Oil Co. No. 4 Goodykoontz, T.D. 6,850 ft.; W.O.
Stanolind O. & G. Co. No. 3 Jahnke, S. Lewis Sur. Drlg. sh. 6,160 ft.

Friendswood—Harris County

Humble O. & R. Co. No. 12-B Humble-West, A. Whitlock Sur. T.D. 6,073 ft.; tstg.
Humble O. & R. Co. No. 32 Humble-West, Luke Hemenway Sur. T.S. 6,-062 ft.; T.D. 6,071 ft.
Humble O. & R. Co. No. 12 Keisling-Dixon, T. Choate Sur. T.S. 5,968 ft.; T.D. 6,047 ft.

Satsuma Field—Harris County

Amerada-Stanolind O. & G. Co. No. 1-A W. S. Jacobs, W.C.R.R. Sur. No. 2. S.D. 6,906 ft.; T.A.
Stanolind O. & G. Co. et al No. 2-A Jacobs, W.C.R.R. Sur. T.D. 6,836 ft.; tstd. dist. 6,822-26 ft.; reperf. csg.

Cheek—Jefferson County

Humble O. & R. Co. No. 1-B Steinhagen, Wm. Carr Sur. Drlg. sh. 2,840 ft.

Clam Lake—Jefferson County

Shell Oil Co., Inc., No. 5 McFaddin, T.& N.O. Sur. No. 341. Loc.

La Belle—Jefferson County

Sun Oil Co. No. 5 Broussard-Hebert, T. &N.O. Sur. No. 207. 18⅝-in. csg. 130 ft. T.D. 7,650 ft.; cmtd. 9⅝-in. csg. on bttm.; drlg. sh. 9,212 ft.

Esperson—Liberty County

General Crude Oil Co. No. 3-B Esperson, A. McNeil Sur. Drlg. sh. 3,267 ft.

Hardin—Liberty County

Gulf Oil Corp. No. 4 Cessna, H. B. Johnston Sur. R.U.
Texas Co. No. 3 Smith, A. B. Hardin Sur. 9⅝-in. csg. 1,819 ft.; T.D. 7,650 ft.; 5½-in. csg. 7,649 ft.

North Markham—Matagorda County

Ohio Oil Co. No. 2 Carlson, I.&G.N. Sur. No. 2. R.U.

Conroe Field—Montgomery County

E. I. Thompson, Tr., No. 1 W. D. Granger, T.&N.O. Sur. No. 14 (Wilcox test SE edge of prod.). 16-in. csg. 82 ft.; drlg. sh. 967 ft.

Orange—Orange County

Continental Oil Co. No. 19 Chesson, Wm. Dyson Sur. T.D. 5,613 ft.; W.O.C.
Gulf Oil Corp. No. 3-B Laflour, Wm. Dyson Sur. Drlg. sh.&L. 4,530 ft.
Gulf Oil Corp. No. 10-A Winfree, Wm. Dyson Sur. Loc.
John Mayo No. 1 M. J. Williams, Dyson Sur. R.U.

Ace—Polk County

Patrick-Tyrell Drlg. Co. No. 1 Kirby-West, P. A. Sublett Sur. Drlg. sh. 7,440 ft.
Dick Schwab No. 1-C Kirby-West Lbr. Co., G. A. Thomas Sur. Loc.
Shell Pet. Corp. No. 2 Doucett, P. A. Sublett Sur. Loc.

Segno—Polk County

Gulf Oil Corp. No. 4 Quinn, A. Morales Sur. R.U.
Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. R.U.
Gulf Oil Corp. No. 19 Wing, I.&G.N. Sur. No. 14. Drlg. sh.&sd. 3,439 ft.
Humble O. & R. Co. No. 12-B Kirby Lbr. Co., M. Victor Sur. 10¾-in. csg. 2,-166 ft.; T.D. 8,190 ft.; 5½-in. csg. on bttm.
Humble O. & R. Co. No. 13-B Kirby Lbr. Co., P. Garcia Sur. Bldg. rd.

Spurger—Tyler County

Republic Prod. Co. No. 20 fee, N. Hurd Lge. T.D. 7,705 ft.; W.O.C.

GULF COAST WILDCATS

Brazoria County

Crosby Drlg. Co. No. 1 H. A. Paine, A. G. Reynolds Sur. R.U.
Fabriguze et al No. 1 Freeport Sulphur, Stephen F. Austin Sur. (Bryan Mound). M.I.M.
Hamman Expltn. Co. No. 1 Darrington, Achilles McFarland Sur. 10¾-in. csg. 1,200 ft.; 7-in. csg. 8,887 ft.; T.D. 8,917 ft.; perf. csg. 8,250-8,300 ft.; flwd. 15 B.P.H.; ¼-in. ck.; wtr. and mud broke in; reperf. csg. 8,650-8,750 ft.; swbg.
Hamman Expltn. Co. No. 2 Darrington State Prison Farm, F. Bingham Sur. W.O. rig.
Glenn McCarthy No. 1 Houston Farm Dev., James F. Perry and E. Austin Sur. No. 7. M.I.M.
Simmons & Co. No. 1 Bula Marmion, L. M. H. Washington Sur. Drlg. sh. 1,-846 ft.
Smith & McDannald No. 1 Slocum, Henry Austin Sur. Drlg. sh. 1,512 ft.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.
Plymouth Oil Co. No. 1 Wilburn, Wm. H. Moore Sur. R.U.

Fort Bend County

Atlati Roy. Corp. and Adams O. & G. Co. No. 1 C. H. Stancl, F. F. E. Alcorn Sur. Cg. 5,210 ft.
Superior Oil Co. No. 1 Shirle Beard et al, H.&T.C. Sur. No. 111. 10¾-in. csg. 1,230 ft.
Woodland Oil Co. No. 1 Henrietta Berg et al, H.&T.C. Sur., Sec. 25. Drlg. sh. 2,986 ft.

Galveston County

Sun Oil Co. No. 1 State, East Galveston Bay. M.I. barge.

Hardin County

Norcoff Corp. No. 1 Caswell, B.B.B.&C. Sur. No. 72 (E flank Saratoga dome). R.U.

Harris County

Consolidated Oil Co. No. 1 Holtkamp, Eli Noland Sur. T.D. 3,226 ft.; fsg.
John Deering No. 1 Ridgeview Farms, Duckworth Sur. 10¾-in. csg. 800 ft.; drlg. sh.&L. 4,036 ft.
J. H. Woodard, Jr., No. 1 Miller Est., John Skorupski Sur. S.D. 5,133 ft.

Jackson County

L. Glasscock No. 1 J. H. Drummond, R. Musquiz Sur. Drlg. 2,136 ft.
T. C. Young and Whitman Drlg. Co. No. 1 R. J. Stephen, R. Musquiz Sur. R.U.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two; S.D.
Hebert & Smith et al No. 1 L. D. Fontenot, Sec. 17, H.T.&B. Sur. Drlg. 6,179 ft.
Humble O. & R. Co. No. 15-B McFaddin Beach State, Gulf of Mexico, 660 ft. NW of No. 13-B. Loc.

Liberty County

Stanolind O. & G. Co. No. 1 E. M. Flowers, I.&G.N.R.R. Sur. 10¾-in. csg. 1,-588 ft.; drlg. sh. 6,439 ft.
Woodley Pet. Co. No. 1 Barrett, Rebecca Coleman Sur. T.D. 8,067 ft.

Madison County

A. O. Phillips et al No. 1 E. P. McWhorter, Amy Boatright Sur. Loc.

Matagorda County

Continental Oil Co. No. 1 Savage, Daniel Yeamans Sur. T. sd. 3,842 ft.; T.D. 3,-845 ft.; well blew out; killed; found hole bridged.
Pierce Est., Inc., No. 2-P fee, Ben J. Rawls and O. H. Stout Sur. R.U.
Sun Oil Co. No. 1 Cavallin, Theo. F. Koch subd., John Duncan Sur. 9⅝-in. csg. 8,502 ft.; T. gas sd. 9,313 ft.; T.D. 9,582 ft.; 7-in. csg. 9,582 ft.; perf. csg. 9,300-18 ft.; flwg. gas, mud, and S.W.; ¾-in. ck.; T.P. 2,200 lbs.; C.P. 1,950 lbs.; killed; reperf. csg. 8,940-65 ft.; C.O.; showing wash wtr.; ⅛-in. ck.; flwd. 150 B.F.P.D., 75% S.W., 25% dist.; 11/64-in. ck.; T.P. 3,300 lbs.; C.P. 3,900 lbs.; killed; P.B. 9,039 ft.; reperf. csg. 8,620-45 ft.; flwd. 58 B.F., 34 bbls. dist., 24 bbls. S.W.; well went dead; W.O.; T.A.

Orange County

C. B. Bunte, Inc., et al No. 1 Miller Vidor Lbr. Co., John M. Swisher Sur. Drlg. sh. 6,336 ft.

San Jacinto County

J. W. Frazier No. 1 Annie Smith, J. D Martinez Sur. No. 10. 10¾-in. csg. 840 ft.; drlg. sh.&L. 6,936 ft.

Wharton County

Cockburn Oil Co. No. 1 Sam Hamburger, W.C.R.R. Sur. 65. Drlg. sh. 5,680 ft.
Magnolia Pet. Co. No. 1 Borden, Henry Griffith Lge. 13⅜-in. csg. 1,322 ft.; T.D. 6,559 ft.; abd.
Moore & Ahern No. 1 Mauritz Beaty, Seale, Forwood Sur. Drlg. sh. 655 ft.

S. W. TEXAS WILDCATS

Bastrop County

Fuchs, Millner et al No. 1 Millner, E. Standifer Sur. S.D. 2,186 ft.
J. H. Gray No. 1 Freytag, Preston Conley Sur. Loc.
Joe Hughes et al No. 1 O. B. Lentz, Freeman Wilkinson Sur. No. 21. T.D. 2,-460 ft.; 5-in. csg. 2,303 ft.; swbd. dry; prep. to dpn.
Marts & Beaven No. 1 Chiles, Wm. McLaughlin Sur. No. 11. Cd. L. O.S. 3,-217-20 ft.; T.D. 3,226 ft.; 5½-in. csg. 3,217 ft.; tstg.

Bee County

Dirks Bros. No. 1 Page, Thos. K. Pilkington Sur. R.U.

Bell County

M. M. Gordon No. 1 Steele, Oliver T. Tyler Sur. S.D. 1,201 ft.
G. P. Shelton et al No. 1 Nelson, Michael Griffin Sur. S.D. 1,208 ft.

Bexar County

Fred Beatty No. 1 Joppich, Iginio Tejado Sur. No. 186. 6¾-in. csg. 575 ft.; S.D. 1,120 ft.; prep. to resume drlg.
L. L. Skaggs No. 1 Braubach, Fernando Rodriquez Sur. S.D. 325 ft.

Blanco County

H. C. McCart No. 1 Geo. Lester, Newton Carson Sur. No. 34. S.D. 280 ft.

Brooks County

Magnolia Pet. Co. No. 2 Denman, Jose Marcelo Hinojosa gr. Loc.

Caldwell County

Ben H. Fuchs No. 1 Chamberlain, Jos. Burleson Sur. S.D. 834 ft.

Cameron County

Salviejo and Pure Oil Co. No. 1 Gatewood and Dewberry, San Martin gr. R.U.

Duval County

J. B. Blanchard et al No. 1 Parr, T. C. Rogers Sur. No. 298. T.D. 4,715 ft.; rec. 400 ft. P.L.O., 30 ft. S.W.; D.S.T. 4,710-15 ft.; flwg. 22 B.O.P.D.; 3/32-in. ck.; T.P. 1,100 lb.; C.P. 1,500 lb.
W. L. Catlin et al No. 1 Louis Escapule, J. Poitevent Sur. No. 73. Loc.
Lee Corkill et al No. 1 Tomkin, P. Benavides Sur., Sec. 30. T.D. 5,521 ft.; abd. 3,605 ft.
Wm. Nichols et al No. 1 Tom Graham, Cuadrilla Irrg. Sur., Sec. 572. Drlg. sh. 3,250 ft.
Geo. Proctor No. 1 Friedrichs, J. H. Gibson Sur. No. 344. R.U.
W. A. Wagner No. 1 D. J. Weikel, John H. Gibson Sur. No. 497. R.U. and S.D

Edwards County

O. L. Alderfer and C. W. Davis No. 1 J. A. Earwood, C.C.S.D.&R.G.N.G.R.R. Sur., Sec. 158. S.D. 80 ft.

Goliad County

Cron & Gracey et al No. 1 O. G. Dreier, B.S.&F. Sur. No. 7. Set 1,320 ft. of 7-in. lnr. at 5,190 ft.; T.D. 5,885 ft.; set 812 ft. of 5-in. lnr.; perf. 5,566-70 ft.; tstd. S.W.; W.O.; tstg. 5,700 ft.

Guadalupe County

Burton, Garvin & Womack No. 1 Henry Weil, E. De los Santos Coy Sur. No. 93. L. O.S. 200-10 ft.; 6-in. csg. 210 ft. acd.; cmt. failed to hold; recmtd.; W. O.C.
John Hueners No. 1 Boecker, John Baker Sur. No. 26. S.D. 915 ft.
Shary Maddox No. 1 A. C. Neal, Santa Anita gr. Loc.
Midwestern Pet. Co. No. 3 W. K. Anderson, Green Dewitt Sur. Cd. sat. L. 2,-355-66 ft.; 7-in. csg. 2,347 ft.; swbd. dry; T.D. 2,388 ft.; abd.
Trio Oil Co. No. 1 Jahns Herman, Jose K. Davis Sur. No. 12. T.D. 3,049 ft.; P.B. to sdtrk.; failed to sdtrk.

Hidalgo County

Pantano Pet. Co. No. 1 R. E. Harding, La Mestena Rnh. subd. (La Blanca field). Loc.
Rowan & Hope No. 1 Antonio Bazan, San Ramon gr., Juan Faris Sur. No. 4. T.D. 7,508 ft.; S.D.
Wheelock & Smith No. 1 Yturria Town & Imp. Co., Anastacio Villareal Por. No. 43. R.U.

Jim Hogg County

Imperial Oil Co. No. 1 Jose M. Gutierrez, H. Rodriquez Sur. No. 142. 10-in. csg. 40 ft.
Johnson & Robinson No. 1 Palacios, Mary Montgomery Sur. Cg. 2,896 ft.
Phillips Drlg. Co. No. 1 Allen, H.&G.N. Sur. No. 21. S.D. 90 ft.

Jim Wells County

Bridwell Oil Co. No. 1 M. W. Smith, La Trinidad Sur. T.D. 5,251 ft.; 5½-in. csg. 5,251 ft.
L. Glasscock No. 1 Robt. Adams, Juan Hermandez Sur. Cg. 5,112 ft.
Tom Graham No. 1 Mull Hrs. of Geo. W. Main No. 30 (Camade field). Drlg. sh. 3,510 ft.
Frank Gravis, Inc., No. 1 O. L. Richardson, J. Poitevent Sur. T.D. 5,330 ft.; tstg.
H. H. Howell No. 1 W. K. Hoffman, Lavaca gr. Drlg. sh. 5,136 ft.
Lewis Prod. Co. No. 1 Robt. Adams, Robt. Adams Sur. T.D. 4,689 ft.; fsg.
Magnolia Pet. Co. No. 1 J. O. Maun, Lot 6, Blk. 11. Drlg. sh. 5,157 ft.
W. R. Quinn et al No. 1 D. M. and Fritz Pundt, T. C. Wright Sur. Drlg. sh. 4,-630 ft.
G. L. Ramsey No. 1 O. L. Richardson, J. Poitevent Sur. T.D. 5,370 ft.; perf. csg. 5,328-35 ft.; tstg.
Randon Oil Co. et al No. 1 Tulley, W. A. O. Wadsworth Sur. R.U.
Dick Schwab et al No. 1 Stehle, H.&G.N. R.R. Sur. No. 3. Drlg. sh. 5,615 ft.
Shell Pet. Corp. No. 1 2 Von Blucher, Lucinda Best Sur. Cg. sd. 7,803 ft.
Smith & Storey No. 1 Shaeffer, Stanley Welch Sur. No. 90. Drlg. sh. 1,039 ft.
Texas Gulf Prod. Co. No. 1 E. E. Miller, Benito Lopez De Jaen Sur. Drlg. sh.& sd. 1,024 ft.
Texas Pet. Co. et al No. 1 J. S. Sheldon, Los Precenos de Arriba Sur. Drlg. sh. 4,375 ft.
R. S. Waldron et al No. 1 C. B. and Peck Welhausen, Geo. Rounds Sur. Drlg. 5,236 ft.

Kendall County

C. M. Dewey No. 2 Seidensticker, R. Davis Sur. No. 20. Drlg. 910 ft.
Fred Turner et al No. 1 Lindner, J. Brown Sur. No. 619. Drlg. 916 ft.

Kenedy County

Humble O. & R. Co. No. 2 Kenedy, E. L. Penascal gr. T.D. 7,818 ft.

Kimble County

W. S. Kelly No. 1 A. L. Bierchwale, D. Lloyd Sur. Drlg. 106 ft.; no report.

La Salle County

Eugene Garner No. 4 Yeager, John H. Gibson Sur. No. 37. Loc.

Lee County

Fred Pederson et al No. 1 Brown, David Hudson Sur. T.D. 6,404 ft.; acd.; R.U.; pmpd. 100 bbls. fluid; 36 hrs.; 3 bbls. oily emulsion, bal. S.W.; cd. L. 6,422-29 ft.; cd. por. L., oil odor; prep. to make D.S.T.

Live Oak County

L. W. Stieren No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

Mid-Western Pet. Corp. No. 1 C. E. Byrne, Geo. Pittuck Sur. S.D. 1,250 ft.
Patada Pet. Co. No. 1 A. J. McKean, M. R. Vela Sur. No. 200. S.D. 931 ft.
C. D. Scarborough and Bigiane No. 1 Paul Foyt, James Garner Sur. No. 6. S.D. 1,228 ft.; 7-in. csg. 1,251 ft.

Medina County

Victor Ziegler No. 1 Paul Haby, Wm. G. Still Sur. No. 1. S.D. 1,000 ft.

Milam County

H. R. Edwards et al No. 2 Camp, D. Robertson Sur. R.U.
R. S. Kirby et al No. 1 Von Gonten, Maria J. Delgado Sur. S.D. 2,260 ft.

Nueces County

Wm. Nicholls No. 1 Florence Richardson, Sec. 10, Enrique Villareal gr. Drlg. sh. 3,630 ft.
Seaboard Oil Co. No. 1-A John LaPrelle, Lot 9, Roberts & White subd. Rec. 630 ft. P.L.O.; D.S.T. 4,347-61 ft.; T.D. 7,437 ft.; P.B. 4,360 ft.; 5½-in. csg. 4,370 ft.; perf. csg. 4,347-54 ft.; flwd. 4 B.P.H.; S.I.
Texas Conservative Oil Co. No. 1 Brock, Sec. 55, Driscoll townsite, Pauls subd. T.D. 4,051 ft.; 7-in. csg. 3,859 ft.; W. O.C.

Refugio County

Humble O. & R. Co. No. 3 Laura Thomas, Patrick Downey Sur. Drlg. 4,026 ft.
Quintana Pet. Corp. No. 10 Williams, C. E.P.I.&M. Co. Sur. Cg. 5,830 ft.
Royal O. & G. Co. et al No. 1 Jurica, Esteban Lopez Sur. T.D. 6,510 ft.; abd.

San Patricio County

Seaboard Oil Co. No. 1 Person, A.B.&M. Sur. No. 6. Drlg. sh.&sd. 5,862 ft.

Starr County

C. L. Foster No. 1 H. Garza, Juan Salinas, Porc. No. 71, S.D.: no report.
Lynes & Robertson No. 1 Villareal, C.C. S.D.&R.G.N.G.R.R. Sur. No. 241. Loc.
Magnolia Pet. Co. No. 1 M. M. Garcia, S. Vela, Porc. No. 90. T.D. 6,567 ft.; 7-in. csg. 6,465 ft.; I.P. 120 B.P.D.; pmpg.
Bishop & Moss No. 1 S. B. Ricaby, M. M. Martinez, Porc. 83. Oil sd. 1,294-1,305 ft.
Rowan & Hope et al No. 1 Cameron, Sur. No. 228. Cd. 4,160-70 ft., oil sd.; T.D. 4,216 ft.; cmtd. csg. on bttm.; perf. csg. 4,160-70 ft.; I.P. 144 B.P.D.; ¼-in. ck.; T.P. 375 lb.; C.P. 575 lb.
Whitfield & Southern No. 1 Carruth, S. Vela, Porc. No. 90, 10-in. csg. 300 ft.; drlg. 2,965 ft.

Travis County

Chester Barnes et al No. 1 Swenson, Lemuel Kimbro Sur. No. 46. 10¾-in. csg. 54 ft.
Oscar Raess et al No. 1 J. W. Swahn, Phillips McElroy Sur. No. 16. S.D. 666 ft.
Williams & Vick No. 1 Montpelier Saving Bnk., C. Barker Sur. No. 38. Drlg. serp. 200 ft.; no report.

Webb County

J. M. Anderson et al No. 1 Frost, C.C.S., D.&R.G.N.G.R.R. Sur. No. 17. Loc.
Harvey and Henderson No. 1 A. Perez, J. Poitevent Sur. No. 459. Cg. sd., oil odor, 2,542 ft.
Johnson and Robinson No. 1 Mabel Adami, A.B.&M. Sur. No. 35. T.D. 999 ft.; balling.
Magnolia Pet. Co. No. 5 Yolpe-Benavides, B.S.&F. Sur. No. 695. Loc.
Navarro Oil Co. No. 2 Benavides, Chas. Callighan Tr. 10-in. 41 ft.; cg. sd. 3,-260 ft.
Gordon Rouse No. 1 Withers, G. B. Withers Sur. No. 52. Drlg. sh. 690 ft.
Rowe & Scheig No. 1 Kirkpatrick, C.C. S.D.&R.G.N.G.R.R. Sur. No. 59. Loc.
Smith & Storey No. 1 Houston Oil Co., R. O. Barnsley Sur. No. 24. 5½-in. csg. 1,830 ft.; perf. csg. 1,834-65 ft.; S.D. 2,475 ft.
Superior Oil Co. No. 2 Frost, C.C.S.D.& R.G.N.G. Sur. No. 35. Drlg. sh. 1,236 ft.

Willacy County

Midwest Royalty Co. No. 1 Dayton, San Juan Decarrutas San Matias subd., Sh. No. 47, 10¾-in. csg. 2,370 ft.; drlg. sh. 7,086 ft.

Williamson County

Burns Oil Co. No. 1 Smith, Jefferson West Sur. Loc.
W. O. Caffey No. 1 J. Seggern, Hardy Pace Sur. Drlg. chk. 970 ft.; no report.
O. A. Wolters No. 1 Nelson, Geo. W. Glasscock Sur. Drlg. 539 ft.

Wilson County

John F. Camp No. 1 Bundrick, H.&T.C. R.R. Sur. No. 111. R.U.

Zapata County

John F. Camp No. 1 Hinnant, R. Hinnant Sur. 72. M.I.M.
Freeman and Smith No. 1 Carlos Vela, Porc. No. 20. Drlg. 175 ft.
Joe Martinez No. 1 A. M. Bruni, J. V. Broego gr. T.D. 459 ft.; P.B. 376 ft.; 6⅝-in. csg. 356 ft.; comp. as dry gas well.
Joe Martinez No. 2 Bruni, J. V. Borego gr. R.U.

Zavala County

H. F. Wilcox O. & G. Co. No. 1 A. A. Story, Jr., G.W.T.&P.R.R. Sur. Drlg. 3,550 ft.

WEST TEXAS WILDCATS

Andrews County

Richmond Drlg. Co. No. 1 University, Sec. 25, Blk. 12, Univ. Sur. M.I.R.
J. W. Tripplehorn No. 1 M. A. Thornberry, Sec. 2, Blk. 42-A. S.D. 4,480 ft.

Brewster County

H. D. Wilcox No. 2 Kokernot, Sec. 23, Blk. C, J. V. Massey Sur. no report.

Cochran County

T. G. Shaw, Tr., No. 1 Carrie S. Dean Lge. 94. Swbg. 12 B.F.P.H. at 5,001 ft.; pulling tbg. to D.D.

Crane County

P. A. Christian No. 1 M. F. Stephenson, Cert. 2044, W. H. Bates Sur. No. 40. Drlg. 2,135 ft.
Gulf Oil Corp. No. 5 M. B. McKnight, Sec. 1, Blk. 21-B, P.S.L. Sur. Est. 51 B.O.P.D.; drlg. 3,908 ft.
Standard Oil Co. of Texas No. 1 N. A. Adams, Sec. 12, Blk. 24-B, P.S.L. Sur. Drlg. 2,590 ft.; no report.

Crockett County

Humble No. 1 Ozona-Barnhart, Sec. 4 Blk. M-N, G.S.&F. Sur. Drlg. 8,641 ft.

Crosby County

Gulf Oil Corp. No. 1-C Swenson, Sec. 96. Blk. 2, H.&G.N. Sur. S.D. 4,037 ft. for heavier drawworks.

Culberson County

Quito Oil Co. No. 1 Cameron Lbr. Co. Sec. 24, Blk. 81, P.S.L. Sur. S.D.R 945 ft.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. S.D. 3,662 ft.
Humble O. & R. Co. No. 1 Matador Ld. & Cattle Co., Sec. 26, Blk. 1, Shock & Arnold Sur. T.D. 7,074 ft.; drlg. plug 6,925 ft.; P.B. 6,925 ft.; tstg. for leak in csg.

Ector County

Barnes-Conklin & White No. 1 T.&P. Lds., Sec. 25, Blk. 45, T.&P. Sur. W.O.C. 3,848 ft.
R. H. Gill No. 1 J. E. Parker, Sec. 12, Blk. 45, T.&P. Sur. W.O.R. 145 ft.
Lee Drlg. Co. No. 1 J. L. Johnson, Sec. 5, Blk. 42, T.&P. Sur. Drlg. 4,154 ft.
M. B. K. Drlg. Co. No. 2 Gist, Sec. 9 Blk. 42, T.&P. Sur. C.O. 4,317 ft.; flwd. by hds.
S. W. Richardson No. 1 T.&P. Lds., Sec. 13, Blk. 45, T.&P. Sur. D.&A.
Sloan & Zook No. 1 J. L. Johnson, Sec. 34, Blk. 43, T.&P. Sur. Drlg. 1,940 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel, R.U.S.T.; to P.B. and sdtrk.; T.D. 3,571 ft.; sidetracking hole 1,925 ft.; W.O.C. 1,752 ft.; no report.

Gaines County

Humble O. & R. Co. No. 1 W. T. Caswell, Sec. 10, Blk. 24-A, P.S.L. Sur. Drlg. 4,250 ft.
Osage Drlg. Co. No. 1 E. H. Jones, Sec. 20, Blk. 7-A, P.S.L. Sur. Drlg. 5,123 ft.; no report.

Glasscock County

J. R. Petty No. 1 Joe Blake, Sec. 163, Blk. 29, W.&N.W. Sur. Drlg. 1,300 ft.
Shell Pet. Corp. No. 1 A. Neal, Sec. 38, Blk. 33, T.&P. Sur. Drlg. 2,635 ft.

Howard County

Dick Graham No. 1 P. Johnson, Sec. 34, Blk. 32, T.&P. Sur. Loc.
Ooley & McQuain No. 1 O'Daniels, Sec. 39, Blk. 30, T.&P. Sur. P.B. 2,830 ft.; C.O.
T. G. Shaw, Tr.-Texas Co. No. 1-B Wilkinson, Sec. 19, Blk. 34. Drlg. 4,255 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ Sec. 34, Blk. 74, Twp. 6, S.G. 6,340-45 ft.; swbg. 6,402 ft.
Haymon Krupp No. 1 Briggs, Sec. 24, Blk. 73, Twp. 7, T.&P. Sur. W.O.C. 5,365 ft.; M.I.M. to D.D.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.&W.T. Sur. S.D.O. 4,450 ft.

Pecos County

L. Cain No. 1 Masterson-Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. Drlg. 490 ft.
Leidecker & Cain No. 1 M. M. Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. S.D.; csg. 1,743 ft.; flwg. 20 B.O.; 24 hr.; C.O.; W.O.C. 1,665 ft.
O. E. Schade No. 1 Otis Garrett, Sec. 59½, Blk. 8, H.&G.N. Sur. Tstg. est. 35 B.O.P.D.; T.D. 2,290 ft.; swbg. est. 20 B.O.P.D.; 5 B.W.P.D.; tstg. on pmp.
Superior Oil Corp. No. 1 V. W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Sur. Tstg. S.G. 1,100 ft.
Superior Oil Co. No. 1 V. W. Crockett, Sec. 7, Blk. 110, T.C.R.R. Sur. C.&P.
S. Thompson No. 1 Elsinore Cattle Co., Sec. 54, Blk. D, G.C.&S.F. Sur. Rig burned; dropped baller in hole; S.D.O. 7,342 ft.
J. C. Trees No. 1 fee, Sec. 93, Blk. 3, H.&G.N. Sur. Tstg. on pmp.; est. 5 B.O.P.D. and 5 B.W.P.D.; S.D.O. 2,359 ft.
C. W. Williams No. 1 J. Eaton, Sec. 1, Blk. 203, J. H. Handy Sur. Drlg. 2,-195 ft.
C. W. Williams No. 1 T.&P. Ld., Sec. 95, Blk. 3, T.&P. Sur. Drlg. 1,015 ft.

Presidio County

L. C. Brite No. 4 fee, Sec. 113, Blk. 12, G.H.&S.A. Sur. S.D.O. 5,602 ft.
Marfa Oil Co. No. 1 Fischer ranch, Sec. 31, Blk. 8, G.H.&S.A. Sur. M.I.M.
H. D. Wilcox No. 2 Jones-Coffield, Sec. 308, Blk. 4, H.&T.C. Sur. C.O. 1,840 ft.

Reeves County

Artie Baker No. 1 J. W. Grider, Sec. 31, Blk. 58, P.S.L. Sur. S.D.R. 450 ft.

Schleicher County

Lone Star Gas Co. No. 1 Bert Page, Sec 30, Blk. L, G.H.&S.A. Sur. Drlg. up baller 5,720 ft.
Lone Star Gasoline Co. No. 2 Bert Page, Sec. 46, Blk. L, G.H.&S.A. Sur. D.&A. 5,798 ft.

Scurry County

Coffield & Guthrie No. 1 First Natl. Bk., Snyder, Sec. 29, Blk. 97, H.&T.C. Sur C.O. 2,450 ft.; T.D. 3,184 ft.; swbg. est. 25 B.O.P.D.; tstg. 3,184 ft.; no report.
J. B. Stoddard No. 1 R. O. McClure, Sec. 142, Blk. 97, H.&T.C. Sur. R.U. spdr.
H. C. Wheeler No. 1 M. Sims, Sec. 141, Blk. 97, H.&T.C. Sur. Drlg. 2,075 ft.

Stonewall County

Forest Dev. Co. and King Drlg. Co. No. 1 Moreland, Sec. 183, Blk. D, H.&T. C. Sur. Drlg. 2,200 ft.

Terrell County

Shirley, Lanham & Blakeney No. 1, Sec. 45, Blk. 2-B, C.C.S.D.&R.G.N.G. Sur.; 2,500-ft. test. Drlg. 165 ft.

Tom Green County

Lynn & Cobb No. 1 I. B. Cox, Val. Mueller Sur. No. 176. S.D. 368 ft.
Roush & Steward No. 1 Pugh, James Eldridge Sur. No. 73. S.D. 194 ft.; est. 10 ft. O.I.H.
Dan Short et al No. 1 J. G. Davidson, NW part of Lovie P. Moore Sur. Drlg. 1,120 ft.
Southern Cross No. 1 Upton & Upton, Sec. 20, Blk. A, A.B.&M. Sur. S.D. 4,579 ft.
Spinner No. 1 Reed, Mason Ferry Ranch Sur. S.D.O. 5,803 ft.; tools out of hole.

Ward County

Peerless O. & G. Co. No. 1 Texas Cotton Ind., Sec. 35, Blk. 1, H.&T.C. Sur. Ttsg. 50 B.O.P.D.; S.I. for storage at 1,866 ft.
Geo. Wallace No. 1 R. Avery, Sec. 36 Blk. 1, H.&T.C. Sur. S.D. 2,104 ft.; no report.

Yoakum County

W. A. Hudson No. 1 J. D. Webb, Sec. 545, Gibson Sur. Drlg. 1,480 ft.
Shell Pet. No. 1 Waples-Platter, Sec. 616. Tstg. 5,380 ft.; hole fills at rate of 100 ft. per hr.; making 1 baller of wtr. per hr.; P.B. 5,312 ft.; pmpg. 145 B.O.P.D., 30% S.W.

TEXAS PANHANDLE

Armstrong County

Holmes, Newblock & Haley No. 1 Ed Moore, Sec. 319, Blk. 4-B, H.&G.N. Sur. Bldg. rig.

Castro County

English et al No. 1 Gundlach, NW¼ Sec. 145, Blk. 6-M, S.K.&K. Sur. Loc.

Collingsworth County

Johnson No. 1 Taylor, Sec. 10-17, H.&G. N. Sur. S.D. 875 ft.

Deaf Smith County

Uscan No. 1 Farwell, Sec. 18, Blk. 3, X. Sur. U.R. 5,626 ft.

Gray County

Products O. & G. Co. No. 1 Mason Davis, Sec. 23, Blk. 23-M, H.&G.N. Sur Loc.

Lipscomb County

Darrousett Oil Co. No. 1 Pugh, 1⅛ mi S and 1 mi. W of Darrouzette. D.&A. 3,401 ft.

Roberts County

E. J. Dunigan, Jr., No. 1 Ledrick, Sec. 34, Blk. C, G.&M. Sur. R.U.R.

Wheeler County

Smith Bros. No. 1 Ribble, Sec. 46, Blk. 5-A, H.&G.N. Sur. Drlg. 2,250 ft.

E. C. TEXAS WILDCATS

Angelina County

Ginter Bros. No. 5 Copes Hrs., J. Morin Sur., 3 mi. E of Dibol. Pmp. little oil 2,193 ft.
Ginter Bros. and Jones No. 6 Copes Hrs., J. Morin Sur., 3 mi. E of Dibol. S.D.R. 1,304 ft.

Camp County

H. S. Moss No. 1 W. D. Keeling, M. A. Esparcia Sur., 2 mi. S of Pittsburg. R.U.

Ellis County

C. M. Beckner et al No. 1 H. A. Styles, A. Bullock Sur., 3½ mi. W of Maypearl. Drlg. 890 ft.

Falls County

M. A. Hayes No. 1 D. G. Wooten, J. Powell Sur., 8 mi. SE of Zott. S.D. 40 ft.
Jack Shaunfield No. 1 Bargonier, J. M. Graham Sur., SE of Chilton. S.D. 410 ft.

Freestone County

W. B. Johnson Drlg. Co. No. 1 D. O. Nettles, W. Carter Sur., 4 mi. SE of Streetman. Drk.

Grayson County

John Grey No. 1 Freedman, W. S. Reeves Sur., 8 mi. NW of Denison. O.S. 1,357-59 ft.; S.D. 1,381 ft.; S.O.; W.O.C. 1,387 ft.
Jim McMurrey No. 1 Dr. T. J. Long, J. Garland Sur., 2 mi. S of Collinsville. 4,000-ft. test. S.D.O. 3,929 ft.
Prince Bros. No. 1 Williams, S. Nix Sur., 2 mi. NE of Van Alystine. S.D. 1,173 ft.
Ross & Marshall No. 1 J. N. Taylor, W. Moore Sur., 3½ mi. NW of Denison.
Sinclair Prairie Oil Co. No. 1 M. Williams, R. H. Sowell Sur., 1 mi. SW of Collinsville. S.S.O. 3,404-28 ft.

Henderson County

Richards & Holloway, Inc., No. 1 G. E. Murphy, J. M. Gardner Sur., 6 mi. SW of Mabank. W.O.C. 3,159 ft.; in sd.
Richards & Holloway No. 1 Rowe & Baker, J. T. Childers Sur., 6 mi. SW of Mabank, 400 ft. W of Tyler & Smith No. 1 Rowe & Baker discovery well. M.I.R.
Tide Water-Seaboard-Humble No. 1 Lewis, J. K. Stokes Sur., 1 mi. N of Opelika area. Drlg. 4,435 ft.
Tide Water-Seaboard-Humble No. 1 Scott, C. Robb Sur., 3 mi. SW of Opelika area. Drlg. 4,590 ft.

Hill County

A. V. Abernathy and L. N. Sanders No. 1 E. M. Farrell, M. Mata Sur., ¼ mi. NE of Mt. Calm. S.D. 870 ft.
Sykes-Brennals No. 1 Weatherly, W. O. Nerriweather Sur., 4 mi. SE of Hillsboro. D.&A. 2,551 ft.

Houston County

Cities Service Oil No. 1 C. C. Hill, J. D. Procella Sur., 2 mi. W of Grapeland. Perf. csg. to test; flwg. 11 bbl. dist. and 5,000,000 cu. ft. of gas.
G. C. Dixon No. 1 W. Goodman, J. J. Thomas Sur., ¾ mi. E of Lovelady. Drlg. 925 ft.
W. W. Henschliffe No. 1 J. Gilmore, Nathan Wade Sur., 1 mi. N of Navarro Crossing pool. Tstg. 5,891 ft.

Kaufman County

Sam Knoerr No. 1 J. B. Hunter, P. Walker Sur., 5 mi. S of Terrell. S.D. 2,200 ft.
Valentine & DeArman No. 1 C. E. Bowman, D. Falcon Sur., 1½ mi. S of Kaufman. D.&A. 3,020 ft.
W. G. McGee No. 1 General American Life Ins. Co., John Baker Sur., 6 mi. W of Mabank. T.S. 3,070 ft.; S.O.; bailing 3,093 ft.
Tyler & Smith No. 1 Trinity farms, G. Crocher Sur., 3½ mi. SW of Mabank. Drk.

Leon County

Humble O. & R. Co. No. 1 W. Johnson, W. Little Sur., outpost to Humble-Harris area. Loc.
Humble O. & R. Co. No. 1 C. R. Polen, H. W. Sublett Sur., 4 mi. NW of Navarro Crossing pool. Rng. csg. to test 5,882 ft.
J. K. Hughes No. 1 H. Pearistone, J. F. Files Sur., 4 mi. S of Keechi. D.&A. 5,566 ft.

Nacogdoches County

D. McDaniels No. 1 T. H. Seale, J. A. Cherino Sur., just outside of city limits of Cherino. Drlg. 500 ft.

Navarro County

W. H. Strong No. 1 Emma Jackson, J. McNeal Sur., 10 mi. S of Corsicana. S.D. 780 ft.
W. H. Strong No. 1 Estes Bros., Wm. Barteiles Sur., 1½ mi. SW of Roane. D.&A. 1,355 ft.
Topaz Oil Co. No. 1 E. Trammel, R. Mathews Sur., 4 mi. NE of Bazzett. Pits.

Rains County

McKinley & Hastings No. 1 McTaggert, B. Milder Sur., 1 mi. W of Emory. S.D. 720 ft.

Robertson County

J. E. Cox No. 1 Sandifer, H. Henry Sur., 3½ mi. SE of Franklin. Loc.

Rusk County

Hamm & Bogges No. 1 W. G. Ross, J. McCune Sur., 3 mi. NW of Mount Enterprise. R.U.

Smith County

Dr. T. T. Grant No. 1 T. W. Thweatt, J. Burch Sur., 2 mi. NE of Garden Valley. D.&A. 4,508 ft.
J. H. Thomason No. 1 J. W. Bartlett, R. H. Stewart Sur., ½ mi. SE of Jamestown. Tstd. S.W.; P.B. 2,012 ft.; S.D. 2,083 ft.

Trinity County

McAlpine No. 1 C. V. Dilley, J. Grissett Sur., 7 mi. N of Trinity. Drlg. 810 ft.

Van Zandt County

F. A. Richardson No. 1-A B. C. Dodd, T. W. Hutchinson Sur., 2 mi. S of Grand Saline. Rng. survey of hole at 4,398 ft.

NORTH TEXAS WILDCATS

Archer County

British American O. P. Co. No. 1 T. B. Wilson, Sec. 12, H.&T.C. Sur. Sat. L. 4,666-4,759 ft.; 8¼-in. 4,739 ft.; perf. 4,666-95 ft.; tstg. est. 1,000 bbl.
G. E. Kadane & Sons No. 1 J. Hemmi, Sec. 60, Clark & Plumb Sur., Blk. 3. T.D. 5,314 ft.; S.D.O.
W. B. Omohundro No. 1 A. B. Peckham, Sec. 22, H.&T.C. Sur., Blk. 1. Drlg. 2,895 ft.
Phillips Pet Co. No. 1 J. B. Miller. Sec 20, A.T.N.C.L. Sur. Fsg.; T.D. 4,074 ft.
L. Sikes No. 1 Miller, Wm. Shaw Sur. A-378. 6⅝-in. cmtd. 5,218 ft.; drld. plug; tstd. S.W.; perf. csg. 3,600 ft.; H.F.S.W.; cmtd.; W.O.C.

Baylor County

British Am. O. P. Co. No. 1 J. E. Cope, Sec. 220, T.&N.O. Sur. 6⅝-in. 2,850 ft.; tstg. after perf. csg. 2,808-15 ft.
British Am. O. P. Co. No. 1 F. C. Green "L," Sec. 8, H.T.&B. Sur. 6⅝-in. 3,130 ft.; perf. 3,060-65 ft.; S.O.&G.; tstg. after perf.; est. 25 B.P.D.

Clay County

L. T. Burns No. 1 E. F. Calloway, Lot 9, Hopkins Co. Sch. Ld. Drk.
Burns and Consolidated Oil Co. No. 1 G. A. Sealing, Sec. 6, H.T.&B. Sur. A-879. Drlg. 4,250 ft.
Frabar-Hodges and Mid-Union Drlg. Co. No. 1 Mrs. R. C. Kinder, Lot 11, Clark & Plumb Sur., Blk. 2. Drlg. 1,392 ft.
Shell Oil Co., Inc., No. 1 W. A. Davis, Sec. 93, J. H. Belcher Sur. Balling S. S.O. 4,923-5,012 ft.; 6⅝-in. 4,923 ft.; W. O.C.; T.D. 5,100 ft.; balling and tstg.

Cooke County

Continental Oil Co. No. 1 W. M. Gwyn, F. J. Lindheimer Sur. A-576. Drlg. 1,695 ft.
Needham & Richards No. 1 Peary, T. Toby Sur. A-1047. Drlg. 2,490 ft.
Sinclair Prairie No. 8 J. M. Best, T.

Toby Sur. A-1054. Tstg. S.S.O. 5,143-71 ft. (200 ft. below regular pay); P.B.; tstg.

Jack County

N. B. Crenshaw et al No. 1 J. W. Kinder, J. G. Coe A-145. Drlg. 2,200 ft.

Montague County

Bridwell Oil Co. No. 1 H. A. Reynolds, Sec. 9, E.T.R.R. Sur. Drlg. 4,105 ft.
Cordova-Union Oil-Gillespie No. 1 Cable, Stephenson Sur., Abst. 462. Drlg. 1,310 ft.

Wichita County

Hanlon-Buchanan, Inc., No. 1 Fassett & Tuttle "F," D.L.&C. Sur. A-596. 6⅝-in. 4,040 ft.; W.O.C.

Young County

Brazos Young Corp. No. 1 Texas Co., J. S. Lee Sur. A-173. Drlg. 4,775 ft.
H. M. Leidecker No. 1 J. M. Nail, Sec. 1997, T.E.&L. Sur. 6⅝-in. 3,095 ft.; G.L.S.O. 4,425-60 ft.; running 5½-in.

EAST TEXAS

(Border Counties)

Cass County

Ark. La. Gas Co. No. 1-B Abney, J. J. Blair Sur. Loc.
Red Iron Drlg. Co. No. 1 N. S. Spearman, Samuel Burnham Sur. R.U.

Marion County—Rodessa

Ark. La. Gas Co. No. 1 Crawford, 25-ac. tr., A. D. S. Coy Sur. Drlg. 3,420 ft.
Texas Co. No. 4 Broden, J. M. Fitzgerald Sur. Drlg. sh.&L. 4,426 ft.
Texas Co. No. 4 Chatten, 467 ft. WL, 2,050 ft. NL lse., Wm. R. Meyers Sur. Drlg. sh.&L. 4,980 ft.

Marion County—Other

Tom Bell No. 1 Moseley, D. Lane Sur. T.D. 2,622 ft.; S.D.

Panola County

Paul Pewitt No. 1 Rushing Est., Mannon Smith Sur. T.D. 6,500 ft.; perf. csg. in Glen Rose section.
Turner & Smith No. 1 J. W. Bird, G. Gillespie Sur. T.D. 4,985 ft.; set 7-in. csg. at T.D.

Shelby County

Earl McDaniel No. 1 C. W. McDaniel Wm. Snider Sur. P.B. to perf. 5,100 ft.; gas-dist. zone.

WEST CENTRAL TEXAS DISTRICT

Brown County

Hickey No. 1 Newton, Stephen Jones Sur., Abst. 546. T.A. 1,015 ft.

Callahan County

Adoms & Ely, Tr., No. 1 Erwin, NW¼ Sec. 350, Geo. Hancock Sur. D.&A.-4,-512 ft.
Joe Fainer No. 1 M. Guyton, John Barton Sur. No. 8, Abst. 11. Fsg. bailer 1,900 ft.
E. L. Thomas No. 1 Ramsey, Sec. 104, B.B.B.&C. Sur. S.D. csg. 1,192 ft.

Eastland County

Dobbs Oil Co. No. 1 Greer, J. E. Hardy Sur., Ellenberger test. Comp.; 60 B.O. P.D.; pool opener.
W. R. Ritchey No. 1 Weddington, Sec. 2054, T.E.&L. Sur. S.D.R. 2,294 ft.

Erath County

Wayne Chandler No. 1 Chandler, J. W Moore Sur., Abst. 571. S.D.R. 4,438 ft.

Hamilton County

Wallace & Vickers No. 1 C. C. Lund, J. P. Bailey Sur. 51. Tstg. 3,377 ft.

Haskell County

Amerada Pet. Corp. No. 1 Kleiner, J. M. Cass Sur. Drlg. 5,528 ft.
E. W. Marland No. 1 Cobb, Sec. 96, Blk. 1, H.&T.C. Sur. Loc.

Jones County

A. B. Bissey No. 1 Mary Spurrier, Sec. 6, Blk. 1, W. C. Walker Sur. Rng. csg. 1,950 ft.
Geo. Callihan No. 1 Prewitt, Sec. 32, B. B.B.&C. Sur. C.O. 2,065 ft.
Fain-McGaha Oil No. 1 J. H. Harris, Blk. 79, DeWitt C.S.L. Sur., 5 mi. W. of Akard pool. Loc.
Gillespie et al No. 1 J. D. Samples, Sec. 45, Deaf and Dumb Asylum Lds. Drlg. 2,000 ft.
Gregg Oil Co. No. 1 S. R. Osment, Sec. 51, B.B.B.&C. Sur. D.&A. 2,667 ft.
E. C. Lawson No. 1 M. M. McNair, Lot 3, Blk. 5, Lawson Sur., 4 mi. SW of Lueders. Loc.
Noark et al No. 1 D. Southard, Sec. 8, D.&D.A. Sur., 2 mi. NW of Griffin pool. Loc.
S. B. Roberts Co. No. 1 C. Herndon, Sec. 6, M.E.P.&P. Sur., 2 mi. S of Anson. Loc.
Shaheen & Keeler No. 1 Radford, between Sayles and Akard pools. Loc.
C. W. Snoddy No. 1 Chas. Stephens, Sec. 35, Orphans Asylum Lds. Drlg. 2,225 ft.
A. H. Tarver No. 1 A. S. Barkley, Sec. 54, Deaf and Dumb Lds. Drlg. 1,605 ft.
Tarver Pet. No. 1 Swanson, Sec. 184, B. B.B.&C. Sur. D.&A. 3,436 ft.

Palo Pinto County

Allen & Ritchie No. 1 fee, J. Pitts Sur. No. 1278. T.D. 1,472 ft.; comp.; 10,-000,000 cu. ft. gas.
Palo Pinto O. & G. Co. No. 2 Rector, Sec. 65, Burleson C.S.L. Sur. Tstg. est. 20 B.O.P.D. at 3,050 ft.
Wilkerson No. 1 McPherson, S. P. Ross Sur., Abst. 839. Drlg. 2,280 ft.
Wilson No. 1 F. M. Watson, Sec. 10, Blk. 2, T.&P. Sur. Mch.

Stephens County

Whittmer O. & G. Co. No. 1 Loving, Sec. 66, B.A.L. Sur.; Ellenberger test to 4,500 ft. Loc.

Kansas Fields

(Continued from Page 75)

Pine Drilling Co. and others No. 1 King, SE NW NE Section 29-31-4, topped Arbuckle lime at 3,415 ft. and was dry and abandoned at 3,421 ft., total depth.

New activity in Cowley County: Western Kansas Oil & Refining Co. No. 4 Ferguson, SE NE SW Section 21-30-8, location; Hartman and others No. 8 Waite, SW NE SW Section 21-31-4, cellar; W. M. McKnabb was building rig for test in SW NE SE Section 20-32-5.

Russell County

Coralena Oil Co. No. 1 Sellens, NW NW SE Section 17-15-13w, Coralena pool, Russell County, found Arbuckle lime at 3,235-40 ft., total depth, and made depthograph potential of 1,820 bbl. of oil daily.

Same company's No. 1 Dumler, SE SE NW Section 36-15-14w, pumped 76 bbl. of oil in 8 hours and made depthograph potential of 542 bbl. from Arbuckle lime at 3,312-21 ft., total depth.

Darby Petroleum Corp. No. 1 Boxberger, SW SW SE Section 22-14-14w, Alion area, had Lansing-Kansas City lime at 3,071-76 ft., total depth 3,083 ft., pumped 564 bbl. of oil in 8 hours and made potential of 1,691 bbl.

W. I. Southern, Inc. No. 2 Trapp, SW SW NE Section 29-15-13w, was a location. Haynes and others No. 1 Landon, SW NE SE Section 11-15-14w, was a rig. Cities Service Oil Co. No. 2-D Tittle, NE NW NE Section 14-15-14w, set casing and was waiting on cement at 252 ft.

Ellis County

Cities Service Oil Co. No. 12-B Hall, SW NE NW Section 26-11-17w, Bemis field, Ellis County, had Arbuckle lime at 3,459-67 ft., total depth, pumped 4 bbl. of oil an hour naturally, was acidized and made daily potential of 3,500 bbls. of oil.

Dickey Oil Co. No. 1-B Henderson, SE SE SW Section 6-11-17w, was moving in material. Darby Petroleum Corp. No. 2 Henderson, NE NE NW Section 7-11-17w, building rotary rig.

Ellsworth County

Cities Service Oil Co. No. 2 Mehl, C W½ W½ NE Section 19-17-9w, Schroeder area, Ellsworth County, pumped 115 bbls. of oil in 8 hours and made daily potential of 345 bbl. Production was from Arbuckle lime at 3,229-39 ft.; total depth.

Barton County

Sinclair Prairie Oil Co. No. 5 Hoffman, NW NE NE Section 7-16-13w, Trapp field, Barton County, was completed in Arbuckle lime found at 3,363-71 ft., total depth, and made echometer potential of 6,262 bbl. of oil daily, with maximum production of 3,000 bbl.

Shell Petroleum Corp. No. 4-B Bitter, SE SW SE Section 6-16-13w, was drilling below 665 ft.

Butler-Greenwood Counties

Adair & Morton No. 2 Ramp, NW NW SW Section 14-28-7, Butler County, found Mississippi lime at 2,680-2,711 ft., total depth, and was completed for estimated daily yield of 25 bbls. of oil.

E. B. Shawver No. 16 Stone, SE SE NW Section 2-25-5, pumped 28 bbl. of oil daily and was completed in Viola lime at 2,420-26 ft., total depth.

In Greenwood County, Kamen & Rosen No. 3 Duke, SW SE SE Section 22-26-9, Reece field, had Mississippi lime at 2,278-95 ft., total depth 2,345 ft., was acidized and pumped 25 bbl. of oil in 24 hours.

In Kingman County, Skelly Oil Co. No. 1-F Miller, C N½ NW Section 20-27-10w, Cunningham district, was building rotary rig.

Adair & Morton No. 3 Ramp, SE NW SW Section 14-28-7, Butler County, was moving in machine.

In Reno County, Transwestern Oil Co. No. 1 Teten, W½ NE SE Section 12-23-4w, was rigging up rotary; Rost & Holt No. 1 Bontrager, NE SE NE Section 4-24-4w, was moving in material

Stafford County

Continental Oil Co. and others No. 1 Saunders, NW NW SE Section 12-25-13w, Leesburgh pool, Stafford County, pumped 646 bbl. of oil in 8 hours, making 24-hour potential of 1,939 bbl. The productive horizon was found in Arbuckle lime at 4,103-30 ft., total depth.

Rooks County

Broadview Oil Co. and others No. 1 Beardmore, NW SE SW Section 2-9-16w, Laton pool, Rooks County, topped Lansing-Kansas City lime at 3,200 ft., was bottomed at 3,210 ft., pumped 172 bbls. of oil in 8 hours after acidizing and made potential of 517 bbl. Gravity of the oil was 40°. It extends the pool three-fourths of a mile northward.

Municipalities in Oil Business

WINNIPEG, Man.—Authority has been granted by the provincial government to Manitoba municipalities, including Winnipeg and St. Boniface, to engage in the gasoline and oil business; subject to approval of the ratepayers and the provincial utility board.

NET INCOMES

(Continued from Page 25)

Declines of from 42 to 50 per cent, or about the average for the group, were recorded by Shell Union Oil Corp., Union Oil of California, Standard Oil of Indiana, Standard Oil of Ohio and Standard Oil of New Jersey.

Earnings of Atlantic Refining, Gulf Oil, Pure Oil, Skelly Oil and Texas Corp. declined from 52 to 59 per cent last year as compared with 1937, while those of Consolidated Oil, Continental Oil, Ohio Oil, Phillips Petroleum, South Penn and Sun Oil Co. were from 60 to 69 per cent lower. Mid-Continent Petroleum Corp.'s drop of 80 per cent was the largest of any member of the group, while Standard Oil of Nebraska, which reported a net loss in both years showed a larger deficit in 1938.

Of the total 1938 net earnings of the 32 companies, 51 per cent was earned by the four leading Standard Oil companies—California, Indiana, New Jersey and Socony-Vacuum. In 1937 they accounted for 48 per cent of the group's total net profits. Together these four companies reported net income of $172,807,715 as compared with $302,006,974 in 1937, or a decrease of 43 per cent. Combined assets of these four Standards totaled $4,297,874,873, or somewhat more than half the total assets of the entire group.

The four leading independent oil companies—Consolidated Oil, Gulf Oil, Shell Union and Texas Corp.—showed a larger percentage decline in their combined earnings and they accounted for a smaller proportion of the group's earnings in 1938 than in 1937. Combined net income of these independents amounted to $55,212,240 in 1938 as against $127,906,559 in 1937 or a decrease of 57 per cent. Their earnings last year were equivalent to 16 per cent of the group's total whereas in the preceding year they accounted for 23 per cent of the total.

Standard Oil Co. of New Jersey, the largest member of the group in respect to total assets, was again the largest earner, reporting net income of $76,053,170 compared with $147,993,147 in 1937. Socony-Vacuum Oil Co., ranking second as to assets and earnings, reported net profits of $40,106,917 as against $56,808,264. Standard Oil Co. of Indiana, third largest in point of size, ranked fourth in 1938 earnings with net profits of $27,771,975 compared with $55,950,785 in 1937, while Standard Oil of California, with the fourth largest assets, was third in earnings which were reported at $28,875,653 against $41,254,778. Texas Corp., fifth largest member of the group, held the same position with respect to net income, its earnings of $23,139,030 in 1938 comparing with $54,574,319 in the preceding year.

The 32 companies charged against earnings in 1938 a total of $529,227,166 for depreciation, depletion, amortization, etc., compared with $517,-447,892 for such charges in the preceding year. This increase, despite the curtailed operations of the industry last year as indicated by the 5 per cent drop in crude output and the decrease of 17 per cent in drilling operations, partly reflects the changes in accounting policy made by several members of the group in recent years. Whereas, formerly all intangible drilling and development costs were charged directly to current earnings, the practice of capitalizing such charges and amortizing them over a period of years has been more generally adopted. Since this change-over was made by several of the larger companies in the past five years, the amortization charges to

current expenses progressively increase as the amount of capitalized intangible development costs accumulates annually over the amortization cycle. Consequently, such amortization charge may increase even though actual expenditures for intangible drilling and development costs decrease in a particular year.

Despite the sharp contraction in earnings and dividends, the petroleum industry continued to show considerable financial growth. The composite balance sheet of these companies as of December 31, 1938, showed total assets of $8,407,605,602, an increase of $106,415,281 over the 1937 year-end. Book value of investment in properties, plant and equipment increased $322,558,058 to $10,410,335,232 at the close of 1938, against which accumulated reserves of $5,278,890,959 were charged.

Aggregate funded and long-term debt again increased in 1938, the total of $896,648,578 at the end of 1938 representing an increase of $245,860,469 during the year. The substantial increase in oil company debt last year reflects the necessity of providing large amounts of new capital for the carrying out of the industry's program of modernization and development, the present need for which has been accentuated by the rapid increase in petroleum demand during the past several years. Furthermore, the active search for new oil, which the industry must carry on if it is to maintain adequate reserves of crude oil, requires substantially larger capital investments under the present system of controlled output than previously.

Financial position of these companies reflected the increased borrowing as well as the consider-

COMPARISON OF ASSETS, LIABILITIES, CURRENT POSITION,

	Assets							Liabilities		
	Properties, plant and equipment	Net fixed assets	Permanent investments and advances	Cash and marketable securities	Inventories, crude and refined oil	Total current assets	Total assets	Common stock	Preferred stock	Funded and/or other long-term debt
Amerada Petroleum Corp.:										
1938	$51,622,753	$11,591,428	$764,593	$2,976,414	$133,670	$4,509,599	$19,732,582	$13,581,375	.....	.....
1937	48,354,329	11,684,811	714,593	3,013,016	146,926	5,131,337	20,307,853	13,581,375	.....	.....
Atlantic Refining Co.:										
1938	240,338,182	142,172,291	4,459,939	14,738,608	21,827,938	51,144,959	199,058,436	66,599,975	$14,800,000	$25,406,849
1937	224,640,556	134,126,471	5,388,511	6,180,294	24,594,492	46,055,288	186,212,606	66,599,975	14,800,000	508,858
Barnsdall Oil Co.:										
1938	[4]33,020,354	[4]11,416,401	7,746,671	1,549,524	562,608	5,010,076	24,863,219	11,251,720	.....	5,089,201
1937	[4]32,932,575	[4]11,628,527	8,246,992	1,207,679	1,034,103	4,911,353	25,091,013	11,251,720	.....	3,861,743
Consolidated Oil Corp.:										
1938	326,888,659	201,583,988	28,375,340	59,208,679	40,870,220	120,681,899	362,145,344	71,094,175	.....	72,179,196
1937	317,035,534	209,354,872	29,290,438	31,267,768	50,632,332	105,089,769	352,318,678	71,094,175	5,449,110	48,564,969
Continental Oil Co.:										
1938	155,874,934	55,862,435	13,343,995	24,475,908	21,273,165	53,996,475	125,112,858	23,692,966	.....	21,071,600
1937	142,334,145	50,970,433	12,201,676	8,383,625	22,916,108	39,543,443	104,350,751	23,692,966	.....	.....
Gulf Oil Corp.:										
1938	737,655,462	350,468,996	31,062,075	40,182,870	60,113,321	160,491,137	546,870,596	226,905,050	.....	75,613,092
1937	704,797,041	339,864,527	58,080,750	31,277,774	62,966,356	158,361,117	560,399,066	226,905,050	.....	72,913,155
Houston Oil Co. of Texas:										
1938	61,533,677	42,042,351	6,346,323	1,770,622	404,754	3,519,574	52,113,772	27,465,450	8,947,600	6,907,500
1937	61,355,371	41,907,653	6,349,224	1,409,593	347,072	3,248,191	51,768,586	27,465,450	8,947,600	7,505,500
Humble Oil & Refining Co.:										
1938	451,865,186	295,440,883	386,015	16,481,862	24,717,971	57,852,702	363,570,276	175,000,000	.....	42,640,804
1937	412,595,594	269,905,259	381,296	6,912,504	27,319,228	52,988,603	329,370,007	175,000,000	.....	1,648,181
Lion Oil Refining Co.:										
1938	22,359,414	12,470,017	290,010	1,242,054	1,395,971	4,174,005	17,442,864	7,594,240	.....	6,891,430
1937	18,912,253	9,749,366	96,131	505,347	1,480,836	3,334,296	13,717,847	7,554,449	.....	3,629,222
Mid-Continent Pet. Corp.:										
1938	93,256,355	38,158,682	3,532,607	7,966,818	8,945,056	21,495,454	63,692,348	18,579,120	.....	.....
1937	94,089,901	39,090,107	3,423,804	7,262,122	10,381,074	22,333,874	65,383,328	18,579,120	.....	.....
Ohio Oil Co.:										
1938	266,996,537	96,328,461	7,160,765	9,100,702	19,189,010	34,298,721	138,670,109	59,235,791	35,453,700	20,000,000
1937	262,210,283	96,387,559	7,022,107	7,866,226	18,965,351	34,493,742	138,856,158	59,235,791	54,807,700	.....
Pacific Western Oil Corp.:										
1938	20,326,383	8,252,145	11,877,085	208,773	64,803	557,020	20,873,841	10,000,000	.....	3,226,750
1937	19,999,297	8,783,910	12,437,862	397,063	45,292	922,622	22,333,019	10,000,000	.....	5,335,757
Phillips Petroleum Co.:										
1938	327,894,506	160,683,925	3,238,018	28,054,336	17,558,390	56,562,787	226,742,375	132,686,674	.....	41,417,920
1937	316,878,457	158,719,013	3,034,830	12,213,026	22,496,481	45,845,144	212,454,213	132,686,674	.....	25,613,235
Plymouth Oil Co.:										
1938	19,775,920	9,908,223	1,586,007	1,189,651	24,232	2,010,911	12,943,734	5,250,000	.....	1,585,000
1937	18,481,622	8,454,823	4,094,087	1,565,639	20,282	2,433,194	15,933,737	5,250,000	.....	1,750,000
Pure Oil Co.:										
1938	[5]227,106,237	[5]132,685,441	12,025,181	7,222,102	15,428,336	34,710,229	180,363,078	39,820,310	72,543,100	2,455,686
1937	[5]217,779,585	[5]126,601,854	10,468,435	10,459,929	17,452,413	40,716,495	178,442,460	39,820,310	72,543,100	2,665,760
Seaboard Oil Co.:										
1938	11,710,717	[6]2,968,905	2,894,926	2,182,097	126,124	3,107,093	9,190,185	4,977,532	.....	.....
1937	10,453,077	6,273,767	2,815,106	2,225,259	88,033	3,249,057	12,540,814	4,977,532	.....	.....
Shell Union Oil Corp.:										
1938	638,370,390	262,819,975	13,098,821	46,080,659	41,795,273	113,766,144	399,399,214	233,672,821	36,038,000	82,879,828
1937	625,812,105	269,950,839	14,365,148	15,967,669	43,863,596	85,948,287	380,202,888	233,672,821	37,004,200	61,021,431
Skelly Oil Co.:										
1938	102,155,436	44,455,396	4,646,953	4,377,656	3,643,404	12,280,998	62,040,073	14,930,229	6,450,000	9,026,681
1937	104,895,823	40,868,979	2,040,560	3,453,141	3,865,490	12,241,621	56,485,282	15,059,229	6,630,000	11,734,598
Socony-Vacuum Oil Co.:										
1938	983,730,779	479,173,355	133,130,604	100,548,807	124,864,519	294,725,728	923,438,918	475,626,780	.....	127,511,486
1937	953,980,850	457,125,753	131,516,372	98,586,739	130,726,418	299,843,734	905,213,255	475,626,780	.....	128,063,217
South Penn Oil Co.:										
1938	113,655,743	15,458,070	9,559,548	6,375,824	5,693,823	13,667,168	38,986,133	25,000,000	.....	.....
1937	113,276,589	16,185,736	9,557,948	6,733,632	5,666,071	14,248,393	40,318,475	25,000,000	.....	.....
Standard Oil of California:										
1938	745,857,846	449,350,905	62,545,179	20,854,941	35,036,373	82,618,129	605,137,556	327,572,500	.....	.....
1937	731,722,929	449,046,236	57,639,034	20,509,134	30,116,104	79,879,472	596,334,441	327,572,500	.....	.....
Standard Oil of Indiana:										
1938	[10]736,216,838	[10]394,827,700	109,366,230	77,180,079	97,825,094	211,858,082	724,663,142	381,800,504	.....	10,346,658
1937	[10]729,723,521	[10]409,188,842	109,261,296	51,146,758	116,392,247	208,171,059	735,079,176	381,675,751	.....	2,596,544
Standard Oil of Kansas:										
1938	4,715,639	3,724,081	125,000	1,007,159	5,561	1,125,574	4,990,518	1,061,897	.....	2,664,225
1937	4,292,584	3,575,894	125,000	99,399	7,709	237,775	5,182,736	1,600,000	.....	1,420,000
Standard Oil of Kentucky:										
1938	35,683,276	21,273,524	483,402	8,756,634	5,612,167	19,121,872	41,056,534	26,047,965	.....	.....
1937	34,055,892	20,230,410	347,958	9,054,034	5,983,204	19,300,380	40,050,548	26,047,965	.....	.....
Standard Oil of Nebraska:										
1938	5,015,592	2,784,655	.....	1,155,057	658,558	2,115,500	4,909,989	4,035,075	.....	.....
1937	5,075,378	2,886,954	.....	1,151,997	823,645	2,183,892	5,083,801	4,160,075	.....	.....
Standard Oil of New Jersey:										
1938	[12]2,553,193,554	[13]1,172,251,955	123,201,590	248,969,721	218,655,081	667,346,196	2,044,635,257	665,451,617	.....	192,850,838
1937	[12]2,502,260,646	[13]1,193,534,803	125,941,845	205,933,070	245,957,968	672,068,285	2,060,815,536	655,619,175	.....	139,268,807
Standard Oil of Ohio:										
1938	71,070,346	42,644,255	3,274,402	10,479,856	7,672,422	22,653,008	70,547,617	18,843,500	12,000,000	6,929,357
1937	65,949,980	39,874,172	3,228,580	7,499,539	8,127,511	18,755,036	63,788,924	18,843,500	12,000,000	1,196,303
Sun Oil Co.:										
1938	146,376,365	79,192,720	14,963,301	14,072,141	17,568,908	43,821,896	139,139,150	79,346,439	10,000,000	21,386,250
1937	136,717,711	74,090,757	15,143,351	6,506,994	18,277,974	37,479,347	128,400,708	79,346,439	10,000,000	9,389,917
Texas Corp.:										
1938	638,959,533	340,738,659	93,039,240	29,553,114	90,350,219	160,639,725	605,360,644	271,922,050	.....	62,869,727
1937	612,958,776	331,363,451	91,001,228	44,432,671	91,516,853	180,509,344	614,793,217	271,875,150	.....	65,667,412
Texas Pacific Coal & Oil Co.:										
1938	22,386,183	9,788,088	5,465	554,608	143,179	1,175,412	11,168,356	8,882,361	.....	.....
1937	21,467,186	8,747,994	8,333	922,970	152,258	1,665,346	10,572,160	8,882,361	.....	.....
Tide Water Associated Oil Co.:										
1938	306,760,735	125,130,785	18,143,939	10,695,940	30,948,506	55,163,895	202,758,519	63,752,530	50,000,000	37,680,000
1937	296,310,771	123,923,854	18,553,328	13,381,797	30,672,331	58,459,298	203,773,245	63,691,750	50,000,000	38,405,000
Union Oil Co. of California:										
1938	254,961,701	115,792,578	930,188	11,752,909	25,679,267	47,773,121	165,993,365	116,656,750	.....	18,018,500
1937	246,426,813	112,174,792	1,024,282	18,970,277	21,566,977	51,029,435	165,515,793	116,656,750	.....	18,026,500
Total 1938	$10,410,335,232	$5,131,444,273	$721,603,502	$810,966,125	$938,787,923	$2,364,056,089	$8,407,605,602	$3,608,337,396	$246,232,400	$896,648,578
Total 1937	10,087,777,174	5,076,272,410	743,800,105	636,496,685	1,014,602,735	2,310,677,689	8,301,090,321	3,599,024,833	272,181,710	650,788,109

* Deficit or loss.

1. Per share common earnings are based on number of shares actually outstanding and computed after allowing for the year's preferred dividend requirements.
2. Total cash dividends paid on preferred and/or common stock.
3. Represents actual number of shares outstanding and does not include reacquired or treasury stock where such figures are available.
4. Plant and equipment only, oil and gas leaseholds are carried at $1.
5. Depreciation and intangible development costs only, no depletion being charged since lease purchases are charged directly to income and amounted to $615,577 in 1938 and $2,730,576 in 1937.
6. Represents preferred dividends only.
7. Excess of current liabilities over current assets.

able balance of net income carried to surplus after the payment of dividends. Combined current assets of the group on December 31, 1938, amounted to $2,364,056,089 as compared with $2,310,677,689 a year earlier, while total current liabilities of $578,315,180 at the close of 1938 compared with $723,032,553 the year before. Net current assets, therefore, increased $197,995,773 to $1,785,640,909 from $1,587,645,136 at the end of 1937. The ratio of current assets to current liabilities was 4.1 at the close of 1938 as compared with 3.2 a year earlier.

TABLE 2—FINANCIAL CONDITION AND LONG-TERM DEBT OF 32 OIL COMPANIES—1928-1938

	Current assets	Current liabilities	Long-term debt
1938	$2,364,056,089	$578,315,180	$896,648,578
1937	2,310,677,689	723,032,853	650,788,109
1936	2,053,835,033	594,861,176	557,184,430
1935	2,087,785,955	557,566,547	580,539,900
1934	2,023,059,269	501,261,646	672,345,470
1933	2,053,662,872	422,587,675	797,304,050
1932	2,111,743,956	388,809,240	914,213,187
1931	2,231,689,300	359,824,886	985,893,659
1930	2,599,025,949	506,526,742	1,042,694,777
1929	2,677,687,630	535,876,123	925,861,712
1928	2,431,365,573	488,096,797	786,365,941

The value at which these companies carried inventories of crude and refined oil decreased 8 per cent to $938,787,923 on December 31, 1938, from $1,014,602,735 at the end of 1937. Since domestic stocks of all oils for the entire industry declined only about 10,000,000 bbl. or less than 2 per cent last year, the decrease in the dollar value of the group's oil inventories largely reflects lower average refined and crude oil prices.

Comparative assets, liabilities, financial condition, capitalization, earnings and dividends of the 32 companies as of December 31, 1938 and 1937, are contained in the accompanying tabulation.

CAPITAL AND EARNINGS OF MAJOR OIL COMPANIES IN 1938

	Liabilities				Income account					
	Earned surplus	Capital surplus	Total current liabilities	Indicated net working capital	Gross operating income	Depreciation, depletion, etc.	Net income	Net income per common share†	Total cash dividends paid‡	Common shares outstanding§
Amerada Petroleum Corp.:										
1938	$4,922,742	.....	$909,799	$3,680,800	$11,327,318	$5,279,357	$1,634,486	$2.07	$1,577,350	788,675
1937	5,055,621	.....	1,416,500	3,714,837	13,940,515	8,201,876	2,400,028	3.04	1,577,350	(No par)
Atlantic Refining Co.:										
1938	63,157,675	$10,113,292	10,421,235	40,723,724	125,731,247	14,307,565	4,310,659	1.40	3,255,999	2,663,999
1937	61,620,209	10,113,292	23,230,878	22,824,410	131,217,204	13,073,260	9,935,045	3.51	3,255,999	($25 par)
Barnsdall Oil Co.:										
1938	*489,695	6,436,937	2,125,735	2,884,341	12,495,417	[5]4,432,851	2,837,897	1.26	2,245,951	2,250,344
1937	1,018,360	5,378,325	3,445,395	1,465,958	13,832,391	[6]6,820,790	1,903,029	0.85	2,242,589	($5 par)
Consolidated Oil Corp.:										
1938	21,644,545	165,404,476	22,807,410	97,874,489	214,760,350	24,230,995	7,737,712	0.55	11,293,126	13,751,846
1937	25,470,164	165,404,476	26,959,088	78,130,681	241,750,281	24,220,874	20,809,295	1.48	12,801,327	(No. par)
Continental Oil Co.:										
1938	20,488,115	49,102,899	8,243,414	45,753,061	80,151,182	14,127,575	5,139,755	1.10	4,682,387	4,682,581
1937	20,030,747	49,102,899	9,147,918	30,395,524	89,180,379	14,114,693	13,948,459	2.98	7,023,589	($5 par)
Gulf Oil Corp.:										
1938	98,162,118	17,146,573	33,660,902	126,830,235	266,328,688	40,127,689	13,017,076	1.43	9,076,202	9,076,202
1937	107,924,535	17,146,573	39,999,818	118,361,299	278,676,278	37,903,291	31,854,065	3.51	9,076.202	($25 par)
Houston Oil Co. of Texas:										
1938	7,880,403	.....	912,818	2,606,756	7,865,249	1,788,133	1,448,813	0.83	[8]536,856	1,098,618
1937	6,793,576	.....	1,056,461	2,191,730	8,099,867	1,839,070	1,574,327	0.94	[8]536,856	($25 par)
Humble Oil & Refining Co.:										
1938	120,108,671	554,912	20,412,158	37,440,544	205,458,293	27,275,364	35,800,353	3.98	17,975,680	8,987,840
1937	102,617,191	554,912	44,742,978	8,245,085	213,266,233	23,932,191	46,924,001	5.21	17,975,680	(No par)
Lion Oil Refining Co.:										
1938	1,057,590	.....	1,899,602	2,274,403	11,329,784	1,316,740	912,482	2.09	434,847	435,815
1937	518,649	.....	1,958,307	1,375,989	10,555,066	1,074,693	945,335	2.17	640.149	(No par)
Mid-Continent Pet. Corp.:										
1938	19,168,892	22,140,239	2,881,202	18,614,252	38,413,249	4,041,417	1,043,791	0.56	1,119,855	1,857,912
1937	19,244,956	22,986,445	3,929,766	18,404,108	41,975,771	4,750,452	5,304,877	2.86	2,788,198	($10 par)
Ohio Oil Co.:										
1938	7,610,744	8,620,850	5,958,397	28,340,324	54,334,074	11,162,293	4,582,964	0.25	4,250,527	6,563,377
1937	7,278,308	10,432,350	5,715,970	28,777,772	64,165,395	12,414,900	11,862,107	1.31	9,851.795	(No par)
Pacific Western Oil Corp.:										
1938	3,351,056	3,416,500	762,626	[7]205,606	3,175,661	1,169,847	1,217,377	1.22	500,000	1,000,000
1937	2,663,679	3,416,500	600,301	322,321	3,861,576	1,788,610	1,388,710	1.39	750,000	($10 par)
Phillips Petroleum Co.:										
1938	37,453,790	.....	12,900,582	43,662,205	111,899,260	20,110,690	9,049,122	2.03	8,898,096	4,449,052
1937	37,302,764	.....	15,187,463	30,657,681	118,722,782	17,333,184	24,113,874	5.42	12,234,882	(No par)
Plymouth Oil Co.:										
1938	4,124,927	.....	1,656,852	354,059	7,136,726	1,514,048	2,609,091	2.59	1,422,435	1,008,000
1937	5,624,599	452,502	1,701,057	732,137	7,370,025	1,644,152	2,935,342	2.85	1,721,295	($5 par)
Pure Oil Co.:										
1938	19,164,713	28,438,897	14,916,447	19,793,782	104,741,634	8,924,780	5,412,903	0.38	[9]3,882,939	3,982,031
1937	17,634,749	28,418,120	14,431,244	26,285,251	119,097,644	8,411,028	11,403,805	2.15	3,844,951	(No par)
Seaboard Oil Co.:										
1938	2,560,714	434,067	738,518	2,368,575	7,405,837	3,409,262	1,895,790	1.52	1,244,383	1,244,383
1937	1,909,306	434,067	874,935	2,374,122	7,654,650	3,105,754	2,447,130	1.97	1,244,383	(No par)
Shell Union Oil Corp.:										
1938	17,661,533	.....	29,147,031	84,619,113	252,831,764	40,147,413	11,318,422	0.72	11,025,501	13,070,625
1937	17,350,251	.....	31,148,103	54,800,184	260,307,699	37,518,393	20,668,880	1.44	14,949,988	(No par)
Skelly Oil Co.:										
1938	11,432,065	13,156,183	4,722,091	7,558,907	35,880,450	5,589,774	2,650,055	2.27	1,485,023	995,348
1937	8,020,729	8,276,853	4,418,513	7,823,108	41,483,607	8,475,507	6,488,346	6.07	1,807,873	($15 par)
Socony-Vacuum Oil Co.:										
1938	106,970,676	106,694,225	70,218,859	224,506,869	554,213,976	43,410,507	40,106,917	1.29	15,575,535	31,206,071
1937	83,100,761	106,553,515	76,196,774	223,646,990	574,024,726	40,068,701	56,808,264	1.82	24,920,857	($15 par)
South Penn Oil Co.:										
1938	11,739,722	.....	1,257,694	12,409,474	25,931,104	1,945,194	1,441,818	1.44	1,750,000	1,000,000
1937	11,934,080	.....	2,245,756	12,002,637	37,119,156	2,499,033	4,643,266	4.64	3,650,000	($25 par)
Standard Oil of California:										
1938	69,019,413	167,947,621	18,128,596	64,489,533	180,848,129	27,080,068	28,875,653	2.22	18,206,795	13,004,153
1937	61,350,555	167,947,621	18,350,215	61,529,257	192,145,982	25,790,756	41,254,778	3.17	26,027,428	($25 par)
Standard Oil of Indiana:										
1938	148,416,908	132,433,418	37,130,628	174,727,454	335,996,016	36,546,729	27,771,975	1.82	15,271,268	15,272,020
1937	136,351,999	148,539,628	51,303,906	156,867,153	365,521,364	34,338,020	55,950,785	3.66	35,075,524	($25 par)
Standard Oil of Kansas:										
1938	693,785	.....	570,609	554,965	1,650,756	427,835	557,831	5.25	215,368	106,190
1937	770,547	579,826	812,363	[7]574,588	1,307,372	341,913	[11]781,783	6.93	565,150	($10 par)
Standard Oil of Kentucky:										
1938	7,158,072	1,638,374	6,162,124	12,959,748	51,541,128	1,334,062	3,779,706	1.45	3,255,989	2,604,797
1937	6,634,355	1,638,374	5,679,855	13,620,525	53,120,924	1,185,819	4,182,900	1.60	3,907,187	($10 par)
Standard Oil of Nebraska:										
1938	20,953	678,171	175,788	1,939,712	4,984,802	147,431	*111,731	*0.69	.....	161,403
1937	137,990	587,902	197,834	1,986,058	5,334,231	153,910	*96,125	*0.58	44,099	($25 par)
Standard Oil of New Jersey:										
1938	482,262,264	80,600,761	177,662,058	489,684,138	1,173,729,821	111,467,598	76,053,170	2.86	[12]39,329,769	26,618,065
1937	482,319,996	80,249,685	237,139,231	434,929,054	1,308,900,351	110,763,088	147,993,147	5.64	65,549,615	($25 par)
Standard Oil of Ohio:										
1938	14,982,707	4,345,070	8,933,202	13,719,806	55,306,628	2,942,489	1,964,605	1.81	1,353,740	753,740
1937	14,337,407	4,345,070	8,129,167	10,625,869	57,864,398	2,699,470	3,362,960	3.67	1,730,610	($25 par)
Sun Oil Co.:										
1938	11,182,964	.....	12,736,277	31,085,619	115,047,237	13,496,953	3,085,119	1.07	2,915,786	2,316,484
1937	10,953,754	.....	13,665,474	23,813,873	133,323,263	13,993,432	9,544,085	3.86	[13]2,744,336	(No par)
Texas Corp.:										
1938	118,999,370	69,913,512	46,859,545	113,780,180	348,922,047	36,300,591	23,139,030	2.13	21,750,321	10,876,882
1937	117,610,661	69,748,240	53,450,738	127,058,606	376,238,307	33,218,397	54,574,319	5.02	26,419,971	($25 par)
Texas Pacific Coal & Oil Co.:										
1938	1,864,026	141,628	275,881	899,531	4,049,381	625,294	1,035,598	1.16	354.876	888,236
1937	1,225,401	141,628	305,683	1,359,663	3,957,975	488,992	983,303	1.11	354,839	($10 par)
Tide Water Associated Oil Co.:										
1938	30,462,067	.....	14,802,064	40,361,831	137,383,719	15,119,591	10,427,273	1.28	8,621,562	6,375,253
1937	28,285,935	.....	16,439,592	42,019,706	145,176,509	15,610,891	15,801,383	2.08	10,156,967	($10 par)
Union Oil Co. of California:										
1938	19,253,961	3,699,117	8,365,036	39,408,085	78,091,465	9,427,031	6,862,757	1.47	5,599,524	4,666,270
1937	17,992,127	3,699,117	9,141,299	41,888,136	85,340,726	9,672,782	12,061,332	2.58	6,465,338	($25 par)
Total 1938	$1,482,487,468	$893,057,720	$578,315,180	$1,785,640,909	$4,618,962,392	$529,227,166	$337,608,469		$219,107,690	
Total 1937	1,421,083,961	906,147,920	723,032,553	1,587,645,136	5,004,532,647	517,447,892	624,752,835		311,935,027	

8. Includes contracts, rights, patents, trade-marks, etc., amounting to $19,693,134 in 1938 and $19,694,286 in 1937.
9. Properties in Mexico at book value of $5,787,159 were written off by establishment of an equivalent reserve in 1938.
10. Includes excess of cost over book value of investments in acquired subsidiaries and goodwill, patents, etc., amounting to $21,417,880 in 1938 and $37,602,807 in 1937.
11. Includes nonrecurring profit of $332,600 on sale of leases and royalties.
12. Includes patents, copyrights, goodwill, etc., amounting to $42,287,230 in 1938 and $43,798,058 in 1937 or $26,189,910 and $29,634,428 net in the respective years.
13. Does not include stock dividend of 3 shares for each 200 shares outstanding or a dividend of 393,372 shares in stock.
14. Does not include stock dividend of 8 per cent.

Personal Paragraphs

J. O. HARPER, scout for Pure Oil Co. in West Texas, has been transferred from Lubbock to Wichita Falls. J. S. LOCK, formerly scout in the Wichita Falls office, has been transferred to Hobbs, N. M.

CHARLES H. RIESZ, Chicago, fellow in chemical engineering, will receive at commencement exercises of Armour Institute of Technology, Chicago, June 8 the first earned degree of doctor of philosophy ever conferred by the institute in any branch of engineering. The research work submitted by Mr. Riesz as his thesis for the doctorate dealt with the improvement of gasoline by increasing its antiknock properties through use of catalysts on various hydrocarbons.

R. T. ZOOK, president of Sloan & Zook Co., of Bradford, Pa., and PAUL TORREY, petroleum engineer for the company in Houston, Tex., were in Shreveport, La., recently on company business.

KENNETH S. ADAMS, president of Phillips Petroleum Co., Bartlesville, Okla., has been elected president of the degree class of 34 Masons enrolled for the annual spring meeting of the Oklahoma consistory in Guthrie.

HOWARD WADDLE, graduate in petroleum engineering from the University of Oklahoma, will join the staff of the Arkansas Oil and Gas Commission in El Dorado. He formerly was associated with Gulf Refining Co. and Rex Drilling Co. in Shreveport, La.

MRS. E. L. DOHENY, widow of E. L. Doheny, wealthy oil man, was notified last week by the chancery office of the archdiocese of Los Angeles that Pope Pius XII had bestowed upon her the title of countess. The title confers no authority, but it is a high Roman Catholic honor that may be bestowed by the Pope only.

J. O. HOARD, president Hoard Exploration Co., Houston, Tex., is making a hurried trip to Greece, where he will look over the lease holdings of the William Helis interests preliminary to sending a seismograph crew to that country. He flew to New York, where he sailed on the liner Bremen for Southampton, England. From there he will fly direct to Greece. He planned to be gone about three weeks.

C. F. NICKLOS, superintendent for Texas Co., in the Rocky Mountain division, has been transferred from Craig, Colo., to the company's headquarters in Denver.

SAM T. HURD has been elected president of the Indianapolis (Ind.) Oil Club. E. L. COPELAND is vice president, L. E. DeSAUTELS secretary, and G. H. YOUNG treasurer.

HOMER EASTERWOOD, N. A. TEDFORD and FRED M. WOOD have organized Easter-Wood Production, with headquarters in Taft, San Patricio County, Texas. The company will engage in drilling and production of oil in the Corpus Christi area. The same operators have organized the Commercial Drilling Co. to operate as drilling contractors.

F. W. ROBSON will be president of the Engineers Club of Tulsa during the coming year. R. G. AYERS is executive vice president; L. G. E. BIGNELL, secretary; R. W. DUCKER, treasurer. Vice presidents are: W. F. McMURRY, programs; W. A. MELTON, public relations; A. A. HARDY, entertainment; CHARLES M. BLOOM, membership. The new officers were installed last Friday evening.

SHIFTS: F. B. MOORE, superintendent Shell Oil Co., Inc., from Moran, Kans., to Pampa, Tex.; FENTON GENTRY, Humble Oil & Refining Co., from Houston, Tex., to Duncan, Okla.; F. E. THOMPSON, Warren Petroleum Co., from Kilgore, Tex., to Fairbanks, Tex.; LEON LUSK, engineer Gulf Oil Corp., from Midland, Tex., to Port Arthur, Tex.; KATHERINE RYAN, president Dolores Oil Co., from San Antonio, Tex., to Longview, Tex.; DON O. CHAPELL, geologist Transwestern Oil Co., from Mattoon, Ill., to Kalamazoo, Mich.; HARVEY WHITAKER, manager Bridwell Oil Co., from Mattoon, Ill., to Wichita Falls, Tex.; JOHN C. ROBESON, engineer Carter Oil Co., from Wilson, Okla., to Tulsa; DR. KARL SOHN, from Berlin, Germany, to Sao Leopoldo Rio Grande Do Sul, Brazil, South America; KURT VON STURM, Yorkman Petroleum Co., from Kansas City, Mo., to Oklahoma City, Okla.; R. D. CLARK, Clark & Cowden Drilling Corp., from Vandalia, Ill., to St. Elmo, Ill.; JOHN N. RISHER, driller, from Shawnee, Okla., to Vincennes, Ind.

E. H. BARLOW, Standard Oil Development Co. engineer, sailed from New York aboard the Santa Rosa May 26 for Venezuela.

T. L. JAMES, oil operator and industrialist of Ruston, La., was awarded the honorary degree of doctor of laws by Centenary College, Shreveport, La., last week.

J. C. HUNTER, Abilene, Tex., was elected a director of the American Petroleum Institute to fill the unexpired term of the late Amos L. Beaty. He is president of Gregg Oil Co.

JOHANN U. KAPPELER, Anglo-Saxon Petroleum Co. geologist, has ended a brief visit in the United States and continued his trip to Guayaquil, Ecuador, aboard the Santa Clara.

JACK H. PUGH, production superintendent for Sun Oil Co., Dallas, Tex., and JACK MANES, safety director, have returned to their offices after looking over the company's operations in Illinois and Kentucky.

RAY V. HENNEN, Morgantown, W. Va., who was chief geologist of the old Transcontinental Oil Co. and now is an independent operator, has been in Oklahoma City and Tulsa recently completing plans for operations in the Missouri area.

L. P. ST. CLAIR, chairman of the board of directors and an executive of Union Oil Co. of California for about 30 years, has resigned as chairman and will retire from active participation in the management. He will remain a director.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

A. T. McGeech, Ardmore, Okla., geologist, attributes the abundance of rainfall in Oklahoma this year to the large volume of natural gas being blown into the air in some of the big fields of the state. Mr. McGeech believes the carbon left by the gas in the air has attracted and held the moisture until precipitated in the form of rain.

John H. Galey, hale and hearty at 74 years of age, growing reminiscent, said the Spindletop field in Texas could have produced 2,500,000 bbl. per day if the oil could have been cared for. He watched one well overflow a 55,000-bbl. tank in 14 hours.

20 YEARS AGO

W. P. Donovan, of Tulsa, general superintendent of the Gypsy Oil Co. gasoline department, dies in a hospital in Philadelphia where he was receiving medical treatment.

Charles B. Shaffer and E. E. Smathers, who sold their oil interests, producing, refining, transportation, and marketing to a syndicate, are reported to have received $34,000,000 for the properties. Mr. Shaffer opened the Cushing, Oklahoma, pool in 1912.

Isaac Shuler purchases the interest of his partner, E. B. George, in the oil firm of Shuler & George, Tulsa, for $800,000.

10 YEARS AGO

The old Jennings pool in coastal Louisiana, which was producing 898 bbl. a day, a week ago, has a new well flowing 5,000 bbl. per day from a sand at 7,288 ft., the deepest hole ever drilled on the Gulf Coast.

Slowly but certainly Lea County, New Mexico, is developing into an oil region. Its biggest well thus far flowed 800 bbl. a day. It is in the Jal area. There is no outlet for the oil.

FRANCIS S. BAER has been elected a director of the Union Oil Co. of California. Mr. Baer is president of the Pacific Finance Co. of California and of Los Angeles Industries, Inc., and a director of the Consolidated Steel Corp, Ltd.

GEORGE T. YOST, formerly superintendent of the Muskogee, Okla., plant of Pure Oil Co., has joined Phillips Petroleum Co. as process engineer at the Borger, Tex., refinery, where considerable construction work is planned.

W. F. MORSE, Mississippi state geologist, in addressing the Mississippi Municipal Officers Association last week, advocated more geological surveys in the state, particularly along the east end of the Sparta-Wilcox trend.

JOE D. HOOD, of Shell Oil Co., Inc., who has been acting as a sample washer for the past few months at the Bakersfield division, has been appointed assistant micropaleontologist and will maintain office at the Bakersfield headquarters of the company.

P. S. MAGRUDER, of General Petroleum Corp., has been nominated for president of the California Natural Gasoline Association, and L. V. CASSADAY has been nominated for vice president. Neither is opposed, so both will be named in the annual election now taking place by mail.

J. B. CARTER, vice president and manager of the land department, and FRANK C. ADAMS, chief geologist, Gem Oil Co., Houston, Tex., have been spending much of their time lately in Jim Wells County, lower Gulf Coast, where their company is drilling an interesting wildcat.

Veteran in Texas Co.

When T. J. Donoghue, executive vice president of the Texas Co., began his service with that organization in 1902 it was operating as the Texas Fuel Co., providing work for a little group of men in the Spindletop field. A one-room office in Beaumont, Tex., was all that its activities required. Mr. Donoghue has seen it grow to a worldwide business, with 30,000 employes and 85,000 stockholders. He is one of four men now living who were with the company at its inception.

T. J. DONOGHUE

Mr. Donoghue's first job was that of assistant treasurer. He soon was advanced to treasurer and then was elected vice president. From 1902 to 1934 he served as a director. He has resided in Houston since the general offices of the company were established in that city in 1908.

Born in Titusville, Pa., Mr. Donoghue's early life was spent around eastern oil fields. At 13 he went to work as a telegraph messenger in Bradford, Pa. At 15 he got a job with the Standard Oil Co. as clerk, following which he received 18 years' intensive training in various branches of the business before he started with the Texas Co.

Mr. Donoghue; George L. Noble, vice president of the Texas Co., and P. C. Scullin, vice president and general manager of the Indian Refining Co., a Texas subsidiary, all of whom will retire from active service July 1, were honor guests recently at a banquet of the Texaco Old Timers Club.

THOMAS S. COOK, assistant manager of foreign refining for Standard Oil Co. of New Jersey, left New York for Venezuela last Friday.

HEATH RENFRO, chief engineer in the Houston district for the Texas Railroad Commission, and Laura Boma, former employe of the commission, were married May 27.

WALTER R. KRAUSE, Titusville, Pa., assistant secretary-treasurer of Kewanee Oil Co., who visited his company's properties in the Mid-Continent, has returned home.

R. M. BENARDEAU, Oklahoma City, Okla., has resigned as vice president and manager of Franco Dominion Development Corp. His plans have not been announced.

JOHN WARD POOLE, former consultant in petroleum technology in New York, has become assistant manager of manufacturing for Lion Oil Refining Co., El Dorado, Ark.

RALPH ROBINSON, of Three Rivers, Tex., auditor for the Henderson Coquat interests, including the Longhorn Drilling Corp., Live Oak Gas Co., and Simmons Oil Co., was in New York last week.

D. B. TANNER has been chosen president of the Bradford District Pennsylvania Oil Producers Association; R. S. PRINGLE, JR., and HUGH GRANT, JR., vice presidents; A. C. SIMMONS, secretary, and A. E. BOOTH, treasurer.

J. EDGAR PEW, vice president of Sun Oil Co. of Philadelphia, Pa., will be guest speaker at the seventh annual conference of the Illinois-Indiana Petroleum Association in Robinson, Ill., June 3. About 600 oil men are expected to attend.

DR. D. M. RUMPH, EFFIE G. RUMPH, and J. M. RUMPH, all of Fort Worth, Tex., have incorporated and last week were granted a charter for the M. E. Oil Co. The company's main production is in Jack County, North Texas.

H. SMITH CLARK, chief geologist in the southern division of Sinclair Prairie Oil Co., Fort Worth, Tex., officiated at a conference in that city last week of all the company's geologists in the southern division. Geologists from Amarillo, Corpus Christi, Midland, Tyler, and other points were present.

P. J. HOFFMASTER, director of the Michigan Conservation Department, has named the following six members of the advisory board created by the state's new oil conservation law: Interstate operators, 3-year term, W. P. CLARKE, Saginaw, Gulf Refining Co.; 2 years, E. F. CLAGETT, Saginaw, Pure Oil Co.; 1 year, KURT H. DE COUSSER, Lansing, Michigan Socony-Vacuum Oil Co. Independent operators, 3-year term, H. M. McCLURE, Alma, Rex Oil & Gas Co.; 2 years, C. A. SMITH, JR., Saginaw, Smith Petroleum Co.; 1 year, Russel Furbee, Mount Pleasant, Gordon Oil Co.

CHARLES H. MURPHY, of Jones, Murphy & Hurley; O. G. MURPHY, of Marine Oil Co., and DR. J. S. RUSHING, of Alice Sydney Oil Co., were named to an operators committee on the Schuler field, South Arkansas, to select an engineer for surveying the pressure maintenance plan.

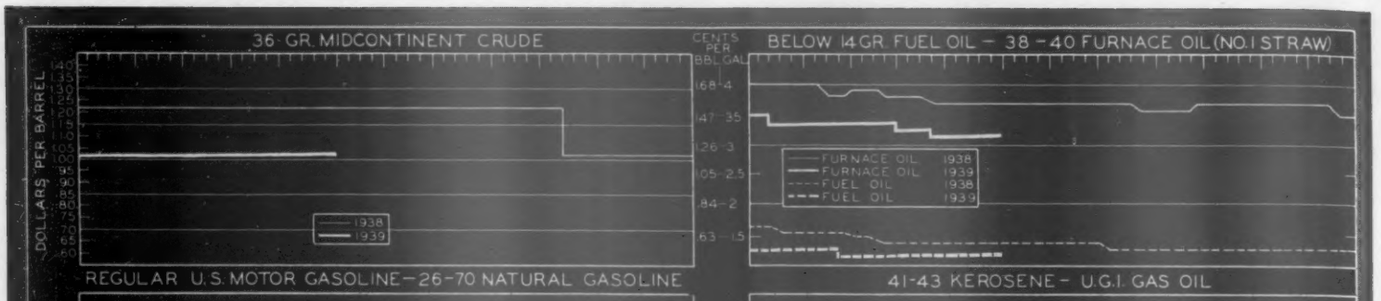
JOHN M. MADISON, Shreveport, La., attorney, was elected president of Atlas Pipe Line Corp. last week following the resignation of E. R. MEINERT. Other new officers are B. F. CONNOLLY, vice president; ARTHUR N. SAMPLE, JR., secretary-treasurer; E. S. KLEIN and H. M. ARTHUR, directors.

H. C. PYLE, Union Oil Co., Los Angeles, Calif., has been elected chairman of the American Petroleum Institute's Division of Production, Pacific district. The following were elected vice chairmen: R. N. McMASTER, Chanslor-Canfield Midway Oil Co., Los Angeles; H. C. STONE, Texas Co., Santa Paula, Calif., and M. W. MORRIS, Standard Oil Co. of California, Taft, Calif. W. G. COREY, Pacific Gear & Tool Works, Los Angeles, was elected treasurer of the company, and D. S. KILGOUR, California Oil and Gas Association, Los Angeles, secretary.

RAYMOND MONKRESS, assistant manager of the land department for Shell Oil Co., Inc., in Midland, Tex., and MISS PATSY GARNER, of Wink, Tex., will be married June 12. They will reside in Midland.

JEROME K. CROSSMAN, president of Ryan Consolidated Petroleum Corp., announced that the company's operating headquarters would be moved from Tulsa to Dallas, Tex. ARTHUR S. JONES, assistant secretary and treasurer, and VICTOR H. JONES and SAM W. JENNINGS, staff men, have been transferred.

M. L. GOSNEY was elected treasurer of Consolidated Oil Corp. at a meeting of the directors in New York last week. J. KOETTING was elected to succeed him as assistant treasurer. Officers re-elected are H. F. SINCLAIR, chairman of the executive committee; HERBERT R. GALLAGHER, president; E. W. SINCLAIR, chairman of the finance committee and executive vice president; SHELDON CLARK, vice president; P. W. THIRTLE, comptroller; W. F. DAU and K. PORTER, assistant treasurers; E. L. WAGON, assistant comptroller; O. M. GERSTUNG, secretary; J. VON BEVERN, assistant secretary.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Group 3 Market Sentiment Cheerful But Lubricants Present Weak Spot

By T. F. SMILEY

Sentiment was cheerful in the Group 3 refinery market this week. The lubricant division was the only one carrying its flag at half-mast, and as that signal had been displayed uninterruptedly for the last two years, it had lost its ability to stir heartache. Gasoline, already firm, was gathering new strength. The naturals, behaving creditably for weeks, were giving no ground. Wax was positively tight. Light distillates were no weaker than they were expected to be at this season. The softness of tractor fuels and kerosene was in harmony with familiar consumption trends.

Another Lift for Gasoline

Gasoline, which received a lift last week through the Standard of Indiana raising tankwagon and dealer prices to normal levels in Illinois and Indiana, had the benefit of another when the company adopted the same tonic in Wisconsin. Refinery sales managers predicted that this correction of subnormal tank-wagon and dealer prices would be extended to Iowa, Missouri, and other states that afford outlets for Oklahoma gasoline.

Other factors contributed to the sounder motor fuel market. The nearness of the touring season, with its promise of unprecedented motor travel, imparted anticipatory buoyancy. The streams of motor vehicles on the country's highways were thickened this week by travel to and from institutions of learning, where the close of commencement programs started thousands of students homeward. Vacations for workfolk were beginning too, and many were on their way to hunting and fishing haunts. The world's fairs in New York and San Francisco were receiving a steadily rising flow of visitors. Another thing that helped to create good feeling was the raising of tankcar prices a quarter-cent in East Texas.

No overheavy inventories were reported, and firm quotations pointed to likelihood of higher prices. "I expect to see the regular grade selling at 5¼ cents by July 1," said one sales manager.

Gratification was expressed over the drop of about 2,000,000 bbl. in the country's gasoline stocks in the two weeks ending May 20, and it was remarked that a continuation of that rate of withdrawal would put inventories in a healthy condition before the end of the summer. It is estimated that existing stocks represent about 56 days' supply. The trade would like to see that pulled down to about 45 days.

Natural gasoline manufacturers said they were satisfied with the course of the market. This is the season of the year when purchases by major refiners are negligible and when prices dive close to the bottom of the graph. This year the takings of independent refiners have been larger than usual and they have helped greatly in keeping prices for 26-70 at 2½ cents since last January. During this season of slackened buying the large manufacturers are storing for fall, when the demands of major refiners will take a sudden spurt. The improving refinery market is exerting a favorable influence on the naturals.

Lubricant Division Weak

Bright stocks and neutrals presented an uninspiring scene. Figures released by the Western Petroleum Refiners Association show there was 99 days' supply of bright stock in Mid-Continent refineries at the beginning of May. "And heaven knows we don't need half that," commented one refiner. Neutrals were in somewhat better case. There was 44 days' supply on May 1, but this was an increase of five days during April. Production of bright stock in April 1939 was 55.6 per cent higher than that of April 1938. Neutrals made a better showing, with April production 2.8 per cent above that in 1938.

All grades of heating oil were being bought for storage against next fall's needs, keeping tankcar prices just about intact.

Refined Oil Market Barometer

The refinery market generally is steady, with gasoline gaining strength as the touring season opens. Tending to prevent the motor fuels from receiving the full benefit of heavy consumption are disordered retail markets and uncertainties over crude prices. Some weak spots in the retail division are being corrected, with promise of extensions to other areas.

MID-CONTINENT. Gasoline firm. Naturals holding. Kerosene and tractor fuels off.

EAST COAST. Gasoline gaining. Heavy fuels stronger. Kerosene quiet.

GULF COAST. Gasoline firm. Gas oils weak. Heavy fuels tight. Prices unchanged.

PENNSYLVANIA. Gasoline somewhat firmer. Neutrals and bright stocks unchanged.

CALIFORNIA. Natural gasoline, fuel oil and Diesel soft, and prices lower.

CHICAGO. Gasoline strong. Kerosene off. Industrial fuel oils firm.

Refined Markets on East Coast Slightly Firmer During Week

By H. STANLEY NORMAN

NEW YORK, May 30.—Undertone of the refined-products markets in the northeastern section of the country was slightly firmer last week, although quotations by the bulk of suppliers were unchanged.

Contracts were reported closed on the Gulf Coast for three or four cargoes of motor fuel to be loaded in June, and the tendency of the market to drift at that primary point was temporarily arrested. Reports reaching New York were that buyers were paying 5 cents per gallon for 68-octane motor fuel and that 5¼ cents was paid for 70-72 gasoline. A small cargo of 20,000 bbl. was reported sold to a French buyer at 5 cents per gallon for motor fuel of 66 octane.

Movement of tourists to the New York World's Fair and to nearby points of historical and scenic interest already has registered a slight impact on motor-fuel consumption along the North Atlantic Coast. Due to the tardy development of spring in this section, motoring conditions have not been particularly inducive to car operation and, therefore, a more abrupt ascendancy of the consumption curve is not surprising. Despite relatively unfavorable weather conditions, most suppliers of petroleum products on the eastern coast report a substantial improvement in volume over requirements of 1938. The increase in business ranges from 5 to 18 per cent.

The heavy fuel-oil situation remains unchanged, although talk of an increase in the New York Harbor market for Bunker C material is heard more frequently. The present price of 95 cents per barrel remains general, but there is no relief in the tight supply condition existing on the Gulf Coast. Those purchasing in the Gulf Coast market for coastwise movement are quoted 75 to 77 cents per barrel. Bunker C oil for ships' bunkers on the Gulf Coast is still moving at 75 cents.

Industrial fuel oil, the shore-plant equivalent of Bunker C, is held by most suppliers at $1.05 per barrel in this section of the country. Heavy fuels are reported increasingly difficult to locate on the Gulf Coast. All factors involved are gradually focusing on higher market quotations for heavy fuels.

The tankcar gasoline market in New York and at other North Atlantic terminals is approximately unchanged from the preceding week. Suppliers at New York are quoting 6 cents per gallon minimum to the tankcar trade for 65-octane motor fuel. Slightly higher prices were quoted for high-octane grades of gasoline at Baltimore, Philadelphia and Charleston last week, but this advance was on the low range of the market and consequently represented no real movement.

The step toward normalizing tank-wagon prices in the Standard Oil Co. of Indiana territory last week had a healthy indirect influence on the East Coast. Upward movement of the market in that territory in the face of resistance from producers of motor fuel from "distress" crude in the Illinois region was considered evidence of healthy demand.

Marketers on the eastern coast are still somewhat "nervous" over the amount of distress crude reaching the hands of refiners, although some of the observers feel that crude-oil prices will at least hold their present ground through the summer. Estimates on the amount of "distress" crude currently reaching the market at from 10 to 50 per cent below posted prices vary from 75,000 to 200,000 bbl. per day.

The Memorial holiday was instrumental in making last week's spot and contract deliveries particularly heavy. Suppliers generally reported the largest volume of business so far enjoyed this summer.

As a partial offset to the relatively firm Gulf Coast market for motor fuel and other refined products, the tanker rates have skidded from 5 to 7½ cents per barrel from the peak touched in the current movement late in April and in the first few days of May. Boats are currently offered at a range of 22½ to 25 cents per barrel for movement from the Gulf Coast to North Atlantic ports. Some reports were current that 20 cents might secure one or two fixtures for prompt service. When the tanker strike reached its most effective point during the last week in April and the first of May, boat rates jumped to a high of 30 cents per barrel for clean tonnage. Successful replacement of striking crews with licensed seamen minimized effectiveness of the National Maritime Union strike, and as a result most of the serviceable boats of the four struck companies are continuing their regular runs. There is no change in the dispute between the N.M.U. and the four companies: Standard Oil Co. of New Jersey, Socony-Vacuum Oil Co., Inc., Tide Water Associated Oil Co., and C. D. Mallory & Co.

While the continued cool weather in this section of the country has hampered the spring motor travel to some extent, it has served to keep light fuel-oil consumption higher than expected. Light burning oils for domestic-heating purposes are generally weak, but most suppliers have held their quotations at levels unchanged from the early part of the month. In New York and vicinity, No. 2 fuel oil in tankcars is generally quoted at 3⅞ to 4 cents per gallon, although some suppliers are clinging to 4⅛ cents. There has been some price cutting in the tank-wagon market during the past two weeks with some offering No. 2 fuel oil as low as 5¾ cents, but this practice is confined to a small percentage of the business and is important only as a market trend. The more abundant use of Diesel fuel oil in transportation and general industry is helping this spring to cushion the shock of the termination of furnace operations. The greater use of Diesel power is particularly reflected in the record of shipments and orders for the first 4 months. Out of 83 locomotives shipped by domestic manufacturers during the first 4 months of 1939 there were 72 Diesel electric units, compared with only 43 out of a total of 130 for the same period in 1938.

The market for scale waxes at New York and New Orleans appears to be firmly established at 3 cents per pound, with supplies strictly limited in western Pennsylvania. Small quantities of 124-126 yellow scale are still available at 2.95 cents per pound, but most suppliers are asking the high.

Kerosene is showing no particular market activity, but prices at a range of 4⅜ to 4½ cents are being maintained at most North Atlantic terminals. A limited amount of 41-43 water-white material is reported available in the New York tankcar market at 4¼ cents per gallon. The Gulf Coast market for this grade of kerosene was reported slightly softer last week at a range of 3¼ to 3½ cents per gallon compared to 3½ to 3¾ cents.

The western Pennsylvania lubricating-oil market remained virtually unchanged. Neutral oil of 200 viscosity at 70° F. was offered at a range of 17 cents per gallon for 25 pour test to 19½ cents for zero oil. The range for 150-viscosity oil was from 15 to 18½ cents per gallon, depending on the pour-point specification. Bright stocks were also unchanged at a range of 16 to 19 cents per gallon.

A. P. I. Weekly Refinery Statistics

FIGURES FOR WEEK ENDING MAY 27 UNAVAILABLE OWING TO MEMORIAL DAY HOLIDAY

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATES)

Week ending May 20, 1939	277,068,000 barrels
Week ending May 13, 1939	277,739,000 barrels
Week ending May 21, 1938	302,597,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of May 30, 1939

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank-wag.	Dir.	Inc. tax	Kero. tank-wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	15.1	13.6	4.0	10.0
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	13.6	4.0	10.0
Quincy	14.9	13.4	4.0	9.7
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	9.4
Minneapolis	16.5	15.0	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.8
Milwaukee	15.4	13.9	5.0	10.2
Detroit, Mich.	13.1	11.6	4.0	7.1
Grand Rapids	14.0	12.5	4.0	9.7
Saginaw	15.8	13.1	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	15.3	5.0	†10.7
South Bend	17.1	15.6	5.0	†10.0
Fargo, N. D.	16.7	15.2	4.0	11.6
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.4	4.0	8.0
St. Louis*	14.2	12.7	4.0	8.0
St. Joseph	14.4	12.0	4.0	8.16
Wichita, Kans.	13.9	11.1	4.0	7.4

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective June 1, 1939, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gallons, 9 cents; 100-149 gallons, 8 cents; 150 gallons and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex furnace oil, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex Grade A, 1-399 gallons, 5 cents; 400 gallons and over, 4 cents. Stanolex Grade B, 1-799 gallons, 5 cents; 800 gallons and over, 4 cents. Stanolex Grade C, 1-999 gallons, 4.25 cents; 1,000 gallons and over, 3.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Dividend dir.	Inc. tax	Kero. tank-wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Cons. tank-car	Dir. tank-wag.	Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	10.9	12.7	4.0	7.0
Newark	10.9	12.7	4.0	7.0
Annapolis, Md.	12.85	14.35	5.0	9.5
Baltimore	12.25	13.75	5.0	7.0
Cumberland	13.65	16.15	5.0	10.0
Wash'gton, D. C.	10.50	12.0	3.0	9.5
Danville, Va.	14.45	16.95	6.0	12.9
Norfolk	13.25	15.75	6.0	11.5
Petersburg	13.55	16.05	6.0	11.7
Richmond	13.55	16.05	6.0	10.7
Roanoke	14.75	17.25	6.0	11.0
Charles'n, W. Va.	14.05	16.55	6.0	12.6
Parkersburg	13.35	14.85	6.0	11.2
Wheeling	14.35	15.75	6.0	12.2
Charlotte, N. C.	15.40	17.90	7.0	11.8
Hickory	15.95	18.45	7.0	12.3
Mt. Airy	15.80	18.50	7.0	12.2
Raleigh	15.15	17.65	7.0	11.5
Salisbury	15.45	17.95	7.0	11.9
Charleston, S. C.	14.25	16.75	7.0	10.6
Columbia	15.25	17.75	7.0	11.6
Spartanburg	15.95	18.45	7.0	12.4

Price basis to Essolene undivided dealers: Dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gallons or more, consumer tank-wagon price. Single deliveries of less than 50 gallons, 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less .5 cent per gallon. The above policy also applies in South Carolina effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Cons'r. tank-wag.	Net dir.	Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	17.5	7.0	9.0
Augusta	19.5	16.5	7.0	9.0
Macon	20.0	17.0	7.0	10.0
Savannah	18.5	15.5	7.0	8.0
Birmingham, Ala.	21.0	18.0	8.0	8.5
Mobile	21.0	18.0	9.0	8.5
Montgomery	21.0	19.0	9.0	10.5
Jackson, Miss.	17.5	14.5	7.0	9.5
Vicksburg	19.0	16.0	7.0	9.0
Jacksonville, Fla.	19.5	16.5	8.0	8.0
Miami	19.5	16.5	8.0	8.0
Pensacola	20.5	17.5	9.0	8.0
Tampa	19.5	16.5	8.0	8.0
Lexington, Ky.	19.0	16.0	6.0	10.0
Covington	17.5	14.5	6.0	9.5
Louisville	17.5	14.5	6.0	9.0
Paducah	18.0	15.0	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-wag.	Serv. sta.	Inc. tax	Kero. tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nev.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle, Wash.	20.0	21.0	6.0	†13.75
Spokane	22.0	23.0	6.0	†16.75
Tacoma	20.0	21.0	6.0	†13.75

*Includes 5-cent state tax. †Includes .25-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

March 18, 1939, split dealer discount was canceled.

Pennsylvania, Delaware, and Part of New England

ATLANTIC REFINING CO.

	Gasoline Cons. tank-car	Dir. tank-wag.	Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.0
Pittsburgh	13.0	13.5	5.0	10.5
Allentown	12.5	14.0	5.0	10.5
Erie	13.0	14.0	5.0	10.0
Scranton	12.5	14.0	5.0	10.5
Altoona	13.0	13.5	5.0	10.5
Dover, Del.		14.0	5.0	10.5
Wilmington		13.5	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers in Pennsylvania and Delaware, effective March 11, 1937: Consumers under contract using 100,000 gallons or more per year full compartment hose deliveries, tankcar plus .5 cent. Consumers under contract using less than 100,000 gallons per year compartment hose deliveries, undivided dealer price. Consumers under contract less than full compartment delivery, consumers not under contract, less than full compartment delivery, and consumers not under contract full compartment delivery, divided dealer price. Less than 25 gallons, tank-wagon delivery, 4 cents per gallon above undivided dealer price.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Cons. tank-car	Dir. tank-wag.	Inc. tax	Kero. tank-wag.
Albany	11.6	13.7	5.0	7.25
*Met. N. Y.:				
Manhat., Bronx	11.7	12.8	5.0	7.0
Queens, Br'klyn	11.7	12.8	5.0	7.0
Staten Island	11.7	13.0	5.0	7.0
Buffalo	12.4	11.8	5.0	7.0
Rochester	12.6	13.5	5.0	8.0
Syracuse	12.2	14.2	5.0	7.5
Boston, Mass.	10.6	12.0	4.0	6.75
Portland, Me.	10.6	13.8	5.0	7.0
Manchester, N.H.	12.3	14.3	5.0	7.5
Burlington, Vt.	12.1	13.5	5.0	7.5
Springfield, Mass.	11.3	12.8	4.0	7.25
Worcester	11.1	12.8	4.0	7.25
Hartford, Conn.	11.0	13.1	4.0	6.50
New Haven	10.9	12.25	4.0	6.00
Providence, R. I.	10.6	12.3	4.0	6.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and New England points for tank-wagon delivery to the following: Annual purchases 10,000 gallons and under, tankcar price plus 2 cents per gallon; annual purchases 10,000 gallons up to 50,000 gallons, tankcar price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gallons, tankcar price plus 1 cent per gallon; annual purchases 200,000 gallons and over, tankcar price plus one-half cent per gallon. Private consumers will pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gallons will receive a discount of one-half cent per gallon.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Dir.	Incl. tax	Kero. tank-wag.
Denver, Colo.	17.5	15.5	5.0	11.5
Grand Junction	20.0	18.0	5.0	15.0
Pueblo	16.0	14.0	5.0	9.0
Casper, Wyo.	19.0	17.0	5.0	11.5
Cheyenne	17.0	15.0	5.0	13.0
Billings, Mont.	18.0	18.0	6.0	13.0
Butte	19.5	19.5	6.0	15.5
Great Falls	19.0	19.0	6.0	15.5
Helena	20.0	20.0	6.0	15.5
Salt Lake, Utah	17.0	17.0	5.0	16.0
Boise, Idaho	20.1	20.1	6.0	18.0
Twin Falls	20.6	20.6	6.0	18.0
Albu'que, N. M.	16.5	16.5	6.5	10.0

*Includes city tax of .5 cent. †Includes state tax of 1 mill.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Cons. tank-car	Dir. tank-wag.	Inc. tax	Kero. tank-wag.
New Orleans, La.	16.75	19.25	*10.0	†11.0
Baton Rouge	14.75	17.25	8.0	‡10.5
Alexandria	14.75	17.25	8.0	‡12.5
Lafayette	15.00	17.50	8.0	‡11.0
Lake Charles	14.75	17.25	8.0	‡12.5
Shreveport	13.50	16.00	8.0	‡11.0
Knoxville, Tenn.	18.00	20.50	8.0	14.5
Memphis	16.00	18.50	8.0	11.0
Chattanooga	17.50	19.00	8.0	14.0
Nashville	17.00	19.5	8.0	12.0
Bristol	18.25	16.50	8.0	13.0

Esselene at dealer price less .5 cent per gallon to undivided dealers.

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gallons, consumer tankcar plus 2 cents per gallon; 50 to 199 gallons, consumer tankcar plus 1 cent per gallon; 200 gallons and over, consumer tankcar plus .5 cent per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank-Wag.	Dir.	Inc. tax	Kero. tank-wag.
Omaha	17.5	16.0	6.0	10.3
McCook	17.0	14.0	6.0	9.0
Norfolk	16.0	14.9	6.0	9.0
North Platte	18.3	15.9	6.0	11.1
Scottsbluff	17.0	14.9	6.0	11.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Dir.	Incl. tax	Kero. tank-wag.
Texarkana, Ark.	13.0	13.0	5.0	8.0
Fort Smith	14.0	14.0	5.0	7.5
Little Rock	16.75	16.75	7.5	8.0
Muskogee, Okla.	12.0	12.0	5.0	7.0
Oklahoma City	11.0	11.0	5.0	6.5
Tulsa	12.0	12.0	5.0	6.5

Texas

	Gasoline Tank-wag.	Serv. sta.	Inc. tax	Kero. tank-wag.
Dallas, Tex.	13.0	17.0	5.0	7.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	13.0	17.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	23.5	10.0	17.5
St. John, N. B.	23.5	10.0	17.5
Montreal, Que.	22.0	8.0	14.5
Toronto, Ont.	23.0	8.0	15.5
Hamilton, Ont.	23.0	8.0	15.5
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.9
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta.	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. of New Jersey May 18 reduced consumer tankcar and dealer tank-wagon gasoline .25 cent in Charlotte, .2 cent in Hickory, .15 cent in Mount Airy, .1 cent in Raleigh, and .3 cent in Salisbury; on same date reduced tank-wagon kerosene .3 cent in Charlotte and Salisbury, .2 cent in Hickory, .1 cent in Mount Airy and Raleigh. The reductions are in agreement with freight reductions.

Standard Oil Co. of Louisiana May 17 reduced tank-wagon kerosene 1.5 cents in Memphis; on same date advanced tank-wagon kerosene 1 cent in Lafayette.

Socony-Vacuum Oil Co., Inc., May 12 advanced consumer tankcar gasoline .2 cent in Manchester; May 15, advanced dealer tank-wagon gasoline .2 cent in Manchester; May 16, advanced dealer

(Continued on Page 98)

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of May 30, 1939

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04⅜	.04¾
70-72 octane (regular)	.04⅞	.05
60-62 400 grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04⅜	.04¾
70-72 octane (regular)	.04⅞	.05
64-66 375	.04⅛	.04¼
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04⅛	.04¼
63-66 octane	.04⅜	.04½
67-69 octane	.04⅜	.04¾
70-72 octane (regular)	.04⅞	.05
60-62 400	.04⅛	.04¼
64-66 375	.04⅛	.04¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04⅜	.04½
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05¼

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
67-69 octane	.04¾	.04⅞

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04⅛	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05⅛
60-62 400 grades:		
62 octane and below	.04⅛	.04⅜
63-66 octane	.04⅜	.04⅝
67-69 octane	.04⅝	.04⅞
70-72 octane (regular)	.04⅞	.05⅛
64-66 375	.04⅛	.04¼
68-70 360	.05	.05¼

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.04⅛
65 octane		.06¼
68-70 octane		.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06	.08
58-60 400, 65 oct. and higher	.07½	.09

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06	.06¼
Philadelphia	.06	.06¾
Baltimore	.06	.06¼
Charleston, S. C.	.06½	.06⅝

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.04¼	.04⅝
60-64.9	.04⅝	.04⅝
65 octane and higher		.04⅞
68-70	.04⅞	.05⅛

Naphtha

PENNSYLVANIA (inland refineries)—

52-56 450 (blending)	.04¼	.04½

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02½
Grade 18-55	.03	.03⅛

NORTH TEXAS—

Grade 26-70		.02½
Grade 18-55	.02⅞	.03

CALIFORNIA—

75-85 375-390	.06	.06¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.02⅞

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110-flash, 540-550 e.p.	.03⅝	.03⅞
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.03¾	.04
46-48 gr., 210-230 i.b.p., 480-max., e.p.	.04⅛	.04⅜

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03¾
42-44	.03⅝	.04

NORTH TEXAS—

41-43	.03⅝	.03¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04	.04¼

ARKANSAS (Ark. and N. La. del.)—

41-43		.04¼

PENNSYLVANIA (inland refineries)—

45	.05	.05⅛
46	.05⅛	.05¼
47	.05¼	.05⅜

CHICAGO (Based on Group 3)—

41-43	.03¾	.03⅞
42-44	.03⅞	.04⅛

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.05¾

NEW YORK (Bayonne, N. J.)—

41-43		.04⅝

***GULF COAST (domestic)—**

41-43		.03½

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03½	.03⅝
No. 1 prime white, 38-42	.03¼	.03⅜
No. 1 straw, 38-40	.03⅛	.03⅜
No. 2 straw, 32-36	.02⅝	.03
No. 2 dark, 32-36	.02⅝	.02¾
No. 3 zero to 15, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅝	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03¼	.03½
No. 1 straw, 38-40	.03⅛	.03⅜

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36		.03

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅜

CHICAGO (Based on Group 3)—

Range oil	.03⅝	.03⅞
No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅛	.03¼
No. 3, zero to 15, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02⅝	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1	.04¼	.04⅜
*No. 2		.04
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02⅝	.02¾
No. 4 low pourpoint, 24-28	.90	1.00
No. 4, 15 and above, 24-28	.80	.90
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH TEXAS—

U.G.I. gas oil	.02⅝	.02¾
No. 4, low pourpoint, 24-28	.90	1.00
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02⅞
No. 4, low pourpoint, 24-28	1.00	1.05
No. 4, 15 and above, 24-28	.85	.90
No. 5, low pourpoint, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pourpoint, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.10	1.30
24 plus Diesel, per bbl.	.90	1.25
24 plus Diesel (bunkers)	1.10	1.30
12-16 (bunkers at tidewater)	.75	.90
10-16 (cargo lots)	.60	.80
12-17 (tankcars)	.50	.90
10-17 (high sulfur)	.45	.85
San Joaquin Valley:		
10-18 (tankcars)	.50	.75
24 plus Diesel, per bbl.	.90	1.20
San Francisco:		
24 plus Diesel, per bbl.	1.40	1.45
24 plus Diesel (bunkers)	1.45	1.55
10-16 (bunkers)	.90	.95

GULF COAST—

No. 2 fuel		.03
43-47 Diesel	.03¼	.03½
48-52 Diesel	.03⅜	.03⅝
53-57 Diesel	.03⅝	.03¾
Bunker C (bulk cargoes)		.75
Bunker C (bunkers)	.75	.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04
28-30 Diesel (lighterage 6¼c per bbl.)		1.65
28-30 Diesel (tankcars)	.04¼	.04½
Bunker C (to ocean-going ships in N. Y. Harbor)		.95
Industrial fuel (tankcars)		.03¼

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14¼	.16
150-160 D, 15-25	.13½	.15½
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12½
600 dark green (untreated)	.04½	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pourpoint	.17½	.18½
15 pourpoint	.16½	.17½
25 pourpoint	.15	.15½
Steam refined:		
600	.08½	.10
650	.10½	.11
600 flash	.11	.12
630 flash	.13½	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-6½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 pourpoint:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.12½

GULF COAST—

Pale oils:		
200-3	.07	.07¼
300-3	.07½	.07¾
500-3½	.08½	.08¾
750-3½	.08¾	.09¼
1,200-3½	.09½	.09¾
1,500-4	.09¾	.10
Red oils:		
200-5-6	.07¼	.07½
300-5-6	.07¾	.07⅞
500-5-6	.08	.08½
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11¾
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pourpoint	.18½	.19
10 pourpoint	.18	.18½
15 pourpoint	.16½	.17
25 pourpoint	.15	.15½
200 vis. at 70° F., 3 color:		
Zero pourpoint	.19½	.20
10 pourpoint	.19	.19½
15 pourpoint	.18½	.19
25 pourpoint	.17	.17½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.0285	.03

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0270	.0280
124-126 (a.m.p.) w.c. scale	.0275	.0280

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0350
125-127 (a.m.p.) wax		.0360
128-130 (a.m.p.) wax		.0375
130-132 (a.m.p.) wax		.0435
133-135 (a.m.p.) wax		.0465
135-137 (a.m.p.) wax		.0490
124-126 (a.m.p.) w.s.	.0255	.0260
124-126 (a.m.p.) y.s.	.0250	.0255
Petrolatum in barrels, carload lots:		
Dark green	.02	.02⅛
Amber	.02⅜	.02½
Extra amber	.02⅝	.02¾
Lily white	.05½	.05¾
Snow white	.06⅛	.06¼
Cream	.04½	.04¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04¼	.04⅝
60-62 400	.04¼	.04⅝
61-63 390	.04⅝	.04⅞
64-66 375		.04

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.04½	.04⅝
65-69 octane	.04¾	.05
Above 69 octane	.05	.05½

KEROSENE

GULF COAST—

41-43 prime white		.03½
41-43 water white		.03⅝

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright stocks:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.0375
125-127 a.m.p.		.0387
128-130 a.m.p.		.0412
133-135 a.m.p.		.0437
135-137 a.m.p.		.0455
Crude scale:		
124-126 w.s.	.0255	.0260
124-126 y.s.	.0255	.0260

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)* $1.10
Van, Tex. (Oct. 11, 1938)* ..... .93
Talco, Tex. (Oct. 11, 1938)* ..... .55
Rodessa, Tex. ..... .
See North Louisiana gravity schedule
Cass and Panola counties, Texas ....
See gravity schedule
Altus and Tipton† ..... See note below
Cayuga, Tex. (Feb. 15, 1939) $0.68
Clay Creek, Tex. ..... .85

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. East Texas price met by all buyers posting prices. Talco price adopted by Talco Pipe Line on Oct. 11. Cayuga posted by Pan American Pipe Line Co. Clay Creek posted by Sun Oil Co.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† ..... .99
Mirando (Oct. 12, 1938)† ....
Government Wells (Oct. 13, 1938) ...
See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Conroe, Tex. (Oct. 11, 1938)* $1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† ..... See note below
Gibson, La. (Oct. 11, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)‡ .. 1.24
Lafitte, La. (Oct. 12, 1938)‡ 1.04
Cleveland, Tex. (Oct. 12, 1938)¶ 1.14
Schwab, Polk County (Feb. 20, 1939) 1.00
Hardin, Tex. (Oct. 12, 1938)¶ 1.02
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.03
Abbeville, La. (Jan. 1, 1939)§ .....
See note below
Bosco, La. (Dec. 3, 1938)‖ $0.93
Creole, La. (Oct. 13, 1938)‖ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)‖ ..... See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 13, 1938)** .....
Long Lake, Tex. (Oct. 13, 1938)** ... $1.08
Segno and Wing (Oct. 13, 1938)** ...
See note below
Livington (Oct. 11, 1938)† $1.10
Gibson, La. (Oct. 11, 1938)† 1.04

*Humble Oil & Refining Co. †Shell Oil Co., Inc. ‡Texas Co. §Continental Oil Co. ‖Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refinery Co.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 36°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wink take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 18°, 75 cents, 2-cent spread to 20°-20.9° at 82 cents; then a 3-cent spread to 26°-26.9° at $1; then a 2-cent spread to 34° and over at $1.16. Schwab posted by Shell Oil Co., Inc.

North Louisiana and Arkansas

Shreveport, La. (Apr. 18, 1939) $1.05
Smackover, Ark. (Oct. 5, 1938)* .... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* ..... See note below
Schuler, Jones sand ..... See note below
Tullos and Urania $0.89
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Lisbon, La. (Apr. 29, 1939) .....
See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

Schuler Jones sand schedule starts at below 25°, 66 cents, with 2-cent spread to 40° and over at 98 cents; by Lion Oil Refining Co. on Oct. 5, 1938; Schuler light Morgan sand crude takes North Louisiana gravity scale along with El Derado and Champagnolie; by Lion Oil Refining Co., Oct. 5; Buckner, Magnolia, and Village schedules posted by Standard Oil Co. of Louisiana and Lion Oil Refining Co. on Oct. 5; quote same prices as for Schuler Jones sand crude. Shreveport by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp. Lisbon: Caddo Crude Oil Purchasing Co., posts below 34°, 73 cents; 34°-34.9°, 75 cents; 35° and above, 77 cents. Effective May 1, 1939, Gulf Refining Co. posted a flat price of 77 cents in Lisbon.

Middle Western States

OHIO OIL CO.
(Effective Oct. 13, 1938)

Illinois old fields $1.05
Illinois basin 1.15
Princeton, Ind. 1.05
Western Kentucky (Oct. 13, 1938)† . 1.10
Birk City, Ky. (Apr. 12, 1939)¶ 1.00
Greendale, Poster, Crystal and Wise, Mich. (Apr. 20, 1938)*‡ ..... .975
Buckeye, Bentley, Edenville, Beaverton, Mich. (Apr. 20, 1939)* ..... .95
Freeman-Redding, Mich. (Apr. 20, 1939)* ..... .89
West Branch and Arenac, Mich. (Apr. 20, 1939)* ..... .74
Allegan-Kent (Apr. 16, 1939)§ ..... .88
Bloomingdale (Apr. 10, 1939) ..... .88
Muskegon 1.00
Sherman, Mich. (Apr. 20, 1939)‡ .... .89
Eastern Kentucky:
Big Sandy River† 1.12
Kentucky River† 1.20

*Simrall Corp. †Ashland Refining Co. ‡Pure Transportation Co. pays above posted prices in Porter, Greendale and Sherman, effective Apr. 20. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939) .
See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† ..... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)* ... $0.92
Elk Basin, Wyo. (Oct. 11, 1938)*† ... .90
Grass Creek, light, Wyo. (Oct. 11 1938)*† ..... .90
Grass Creek, heavy (Oct. 11, 1938)† . .40
Lance Creek, Wyo. (Oct. 11, 1938)* . .77
Rock Creek, Wyo. (Oct. 11, 1938)* .. 1.00
Iles, light, Colo. (Oct. 11, 1938)† .... .98
Iles, heavy, Colo. (Oct. 11, 1938)† ... .92
Dutton Creek, Wyo. (Oct. 11, 1938)† .....
See note below
Frannie, light, Wyo. (Oct. 11, 1938)† $0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)† ..... .42
Hamilton dome, Wyo. (Oct. 11, 1938)† ..... .35
Midway, Wyo. (Oct. 11, 1938)† .....
See note below
Salt Creek Tensleep crude, Wyo. (Oct. 11, 1938)† $0.646
Salt Creek (Oct. 11, 1938) See note below
Canon City, Colo. (Oct. 11, 1938)‡ .. $0.90
Florence, Colo. (Oct. 11, 1938)‡ .... .90
Cat Creek, Mont. (Oct. 11, 1938)‡ ... 1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡ ... .98
Lance Creek, Wyo. (Oct. 11, 1938)‡ . .77
Lea County, New Mexico .....
See West Texas gravity schedule‡
Artesia, Jackson and Maljamar .....
See gravity table‡
Fort Collins and Wellington, Colo. ...
See gravity table‡
Eddy County, New Mexico (Oct. 11, 1938)§ $0.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2 cents spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico.

Eastern States

SOUTH PENN OIL CO.
(Effective Mar. 6, 1939)

Pennsylvania Grade oil in National Transit lines (Bradford field) ... $2.00
Pennsylvania Grade oil in Southwest Pennsylvania lines 1.65
Pennsylvania Grade oil in Eureka Pipe Line lines 1.59
Pennsylvania Grade oil in Buckeye Pipe Line lines 1.55
Corning grade oil in Buckeye Pipe Line Co. line (Jan. 24) 1.02

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO
(Effective Mar. 6, 1939)

Bradford, Pa. $2.00
Allengany, N. Y. 2.00

PENNZOIL CO.
(Effective Mar. 6, 1939)

Group A $1.95
Group B 1.94
Group C 1.93
Group D 1.92
Group E 1.90

PURE OIL CO.
(Effective Mar. 6, 1939)

West Virginia $1.59

Canada

ONTARIO
(Oct. 25, 1938, by Imperial Oil, Ltd.)

Petrolia $1.90
Oil Springs 1.97

Rocky Mountain Runs

Production estimates for week ended May 27:

	Barrels
WYOMING	
Salt Creek	14,770
Big Muddy	1,190
Byron	4,690
Dallas Derby	450
Elk Basin	560
Frannie	1,510
Garland	2,490
Grass Creek	2,390
Hamilton Dome	1,740
LaBarge	910
Lance Creek	15,630
Lost Soldier	1,820
Mahoney	320
Medicine Bow	2,030
Oregon Basin	2,640
Osage	750
Quealy Dome	630
Rock River	2,980
Wertz	1,630
Miscellaneous	1,200
Total Wyoming	60,340
MONTANA	
Total Montana	14,670
COLORADO	
Total Colorado	3,930
NEW MEXICO	
Cooper	4,510
Eaves	900
West Eunice	110
Eunice	24,640
Hardy	3,630
Hobbs	13,080
Jal	740
Langlie	5,700
Lynch	550
Lynn	870
Mattix	4,480
Monument	25,500
North Lynch	40
Penrose	5,770
Rhoades	140
Skaggs	90
Skelly	1,910
South Eunice	3,970
South Lovington	220
Vacuum	10,150
Artesia-Maljamar	8,990
Getty	100
Hogback	200
Rattlesnake	500
Table Mesa	60
Total New Mexico	116,850
Total Rocky Mountain region	195,790

Tank-Wagon Changes

(Continued from Page 96)

tank-wagon gasoline .75 cent in Rochester and .3 cent in Portland.

Standard Oil Co. (Indiana) May 27 advanced dealer gasoline .4 cent in Green Bay; same date, advanced tank-wagon and dealer gasoline .5 cent in Milwaukee; same date, advanced tank-wagon kerosene .5 cent in Green Bay.

Crude Prices by Gravities

	1 Oklahoma	2 Oklahoma and Kansas	3 North and Central Texas	4 Louisiana and Arkansas	5 East Central Texas	6 Gray County, Texas	7 Hutchinson and Carson counties, Texas	8 Raccoon Bend, Satsuma and Tomball, Texas	9 West Texas and Lea County, N. M.	10 Fort Collins and Wellington, Colo.	11 Anahuac and Dickinson, Mirando, Duval, Texas.	12 Refugio, Texas	13 Gulf Coast Texas	14 Cass and Panola counties, Texas	15 Beaumont and West Beaumont, Texas	16 Lockport, Iowa, Cameron Meadows, Louisiana	17 Artesia, Jackson and Maljamar, N. M.	18 Iowa, Louisiana
Below 18	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	$.74	....	$.75
18-18.9	....	....	....	....	....	....	....	....	$.53	....	$.74	$.79	$.79	....	....	.76	....	.77
19-19.9	....	....	....	....	....	....	....	....	.53	....	.74	.79	.79	....	$.79	.78	....	.79
20-20.9	$.60	$.70	....	....	....	....	....	....	.55	....	.77	.82	.82	....	.82	.80	....	.81
21-21.9	.63	.72	....	....	....	....	....	....	.57	....	.80	.85	.85	....	.85	.82	....	.83
22-22.9	.66	.74	....	....	....	....	....	$.95	.59	....	.83	.88	.88	....	.88	.85	....	.86
23-23.9	.69	.76	....	....	$.78	....	....	.97	.61	....	.86	.91	.91	....	.91	.88	....	.89
24-24.9	.72	.78	$.71	....	.80	....	....	.99	.63	....	.89	.94	.94	....	.94	.91	....	.92
Below 25	....	....	....	$.73	....	....	....	....	....	....	....	....	....	$.73	....	....	....	....
25-25.9	.75	.80	.73	.75	.82	....	....	1.01	.65	....	.92	.97	.97	.75	.97	.94	....	.95
26-26.9	.78	.82	.75	.77	.84	....	....	1.03	.67	....	.95	1.00	1.00	.77	1.00	.97	....	.98
27-27.9	.81	.84	.77	.79	.86	....	....	1.05	.69	....	.97	1.02	1.02	.79	1.02	.99	....	1.00
28-28.9	.84	.86	.79	.81	.88	$.72	$.67	1.07	.71	$.81	.99	1.04	1.04	.81	1.04	1.01	$.61	1.02
29-29.9	.87	.88	.81	.83	.90	.74	.69	1.09	.73	.83	1.01	1.06	1.06	.83	1.06	1.03	.63	1.04
Below 30	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30-30.9	.90	.90	.83	.85	.92	.76	.71	1.11	.75	.85	1.03	1.08	1.08	.85	1.08	1.05	.65	1.06
31-31.9	.92	.92	.85	.87	.94	.78	.73	1.13	.77	.87	1.05	1.10	1.10	.87	1.10	1.07	.67	1.08
32-32.9	.94	.94	.87	.89	.96	.80	.75	1.15	.79	.89	1.07	1.12	1.12	.89	1.12	1.09	.69	1.10
33-33.9	.96	.96	.89	.91	.98	.82	.77	1.17	.81	.91	1.09	1.14	1.14	.91	1.14	1.11	.71	1.12
34-34.9	.98	.98	.91	.93	1.00	.84	.79	1.19	.83	.93	1.11	1.16	1.16	.93	1.16	1.13	.73	1.14
Below 35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.00	1.00	.93	.95	1.02	.86	.81	1.21	.85	.95	1.13	1.18	1.18	.95	1.18	....	.75	....
36-36.9	1.02	1.02	.95	.97	1.04	.88	.83	1.23	.87	.97	1.15	1.20	1.20	.97	1.20	....	.77	....
37-37.9	1.04	1.04	.97	.99	1.06	.90	.85	1.25	.89	.99	1.17	1.22	1.22	.99	1.22	....	.79	....
38-38.9	1.06	1.06	.99	1.01	1.08	.92	.87	1.27	.91	1.01	1.19	1.24	1.24	1.01	1.24	....	.81	....
39-39.9	1.08	1.08	1.01	1.03	1.10	.94	.89	1.29	.93	1.03	1.21	1.26	1.26	1.03	1.26	....	.83	....
40 and over	1.10	1.10	1.03	1.05	1.12	.96	.91	1.31	.95	1.05	1.23	1.28	1.28	1.05	1.28	....	.85	....

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1939 High	1939 Low	Week ending May 27 High	Week ending May 27 Low	Week ending May 27 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
70	50	70	63	68¼	Amerada Corp.	788,675	N.P.	50cQ	1-31-39	$2.00	$2.07	$3.04	78	55	111⅞	51½
23½	18½	21	19⅝	20¾	Atlantic Refining	2,663,999	$25	25cQ	6-15-39	1.00	1.40	3.51	27⅝	17¾	37	18
21½	10⅞	14¼	13	14	Barber Asphalt Co.	390,223	$10	75c	12-16-37	....	—.85	1.91	23¾	12⅛	43⅜	10⅛
19½	12⅜	14½	13½	14⅜	Barnsdall Oil Co.	2,250,344	$5	25cQ	2-1-39	1.00	1.26	.85	21⅝	10⅛	35¼	10
9¼	7	7⅞	7⅝	7⅞	Consolidated Oil Corp.	13,751,846	N.P.	20cQ	5-15-39	.80	.55	1.48	10¾	7	17⅞	7
31½	21⅛	23¾	22	23½	Continental Oil of Delaware	4,682,581	$5	25cQ	6-27-39	‖1.00	1.10	2.98	35¾	21¼	49	24
8⅜	4⅞	6¼	5¾	6¼	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	.83	.94	9¾	5	17⅝	4¾
20¼	12⅜	15¾	14½	15¾	Lion Oil Refining	435,815	N.P.	25cQ	4-20-39	1.00	2.09	2.17	25½	15⅝	34	12½
16½	11⅛	14	13⅛	14	Mid-Continent Petroleum	1,857,912	$10	25c	6-1-39	.60	.56	2.86	22⅝	12¼	35⅝	14
14⅞	10⅜	11¾	11⅛	11¾	Mission Corporation	1,379,245	$10	$1	6-29-38	1.00	1.04	1.31	17¾	10⅝	34	15
15½	6½	8¾	7⅞	8¾	National Supply	1,155,517	$10	$2 pf.‡	12-22-37	....	—.79	4.90	23	12½	41⅜	17⅝
10¼	6⅝	7½	7	7⅜	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	.20	.25	1.30	14⅞	8⅜	22⅞	8
34¾	27½	9⅞	9⅞	9⅞	Pacific Western Oil	1,000,000	N.P.	50c	12-20-38	.50	1.22	1.39	15⅞	10¼	29⅜	11¾
6¾	5½	..	..	..	Pan American Pet. & Trans.	4,702,945	$5	$1*	12-21-37	....	.08	1.18	9¼	6¼	17⅛	7
43¾	31¼	36½	34⅝	35½	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-39	‖2.00	2.03	5.42	44⅜	27¼	64	30⅛
22½	17¼	21¼	20¼	20½	Plymouth Oil Co.	1,006,200	$5	35cQ**	6-30-39	1.40	2.59	2.85	25⅝	15	29⅞	13
11¼	7	7⅞	7⅜	7¾	Pure Oil Co.	3,982,031	N.P.	25c	12-1-37	....	.38	2.15	13½	8¼	24⅜	8¾
10¼	6⅝	8⅜	7¾	8¼	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-38	.50	.51	.35	9⅞	5	6½	4⅛
22⅜	16⅛	19¾	18	19¾	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-39	1.00	1.52	1.97	27½	15½	54⅛	16
15⅛	15⅝	11½	11	11½	Shell Union Oil	13,070,625	N.P.	35c	12-20-38	.70	.72	1.44	18⅜	10	34¾	14⅞
29½	18½	20¾	19¼	20½	Skelly Oil	995,349	$15	50c	12-15-38	1.00	2.27	6.07	34¾	18½	60⅝	26½
13¾	10½	12¼	11⅞	11⅞	Socony-Vacuum	31,206,071	$15	25cSA	3-15-39	.50	1.29	1.82	16⅜	10¾	23¼	13
30⅛	25¼	26½	25⅝	25¾	Standard Oil of California	13,004,153	N.P.	30cQ†	3-15-39	1.40	2.22	3.17	34⅞	25⅛	50	27⅛
29⅛	23¼	25½	24½	25⅜	Standard Oil (Indiana)	15,272,020	$25	25cQ	6-15-39	1.00	1.82	3.66	35½	24¾	50	26½
50⅝	46	..	..	..	Standard Oil of Kansas	106,190	$10	$2	12-8-38	2.00	5.25	6.93	50⅛	32½	43	30⅝
53¼	41⅞	44⅞	41⅞	44¾	Standard Oil of New Jersey	26,618,065	$25	50c§	12-15-38	§1.50	2.86	5.64	58⅜	39¾	76	42
66	46	51	51	51	Sun Oil	2,316,484	N.P.	25cQ	6-15-39	1.00	1.07	3.86	65⅛	45	77½	44½
3¼	2	2⅝	2	2⅜	Superior Oil Corp.	1,388,079	$1	10c	12-28-38	.10	.24	.32	4¼	1¾	7¾	1½
48¼	35	41	38	40⅛	Texas Corp.	10,876,882	$25	50cQ	4-1-39	2.00	2.13	5.02	49⅝	32⅝	65⅛	34¾
5⅜	3½	4⅛	3⅞	4⅛	Texas Gulf Producing Co.	888,142	N.P.	10c	6-15-39	.15	.86	.68	5⅞	2⅝	9⅝	2
10⅛	7½	8⅛	7⅝	8⅛	Texas Pacific Coal & Oil	888,236	$10	10c	6-1-39	.40	1.16	1.11	12½	7	16⅝	5⅜
14¼	11¼	12⅜	12	12	Tide Water Associated	6,375,253	$10	25c	6-1-39	1.00	1.28	2.08	15¾	10⅛	21⅝	13⅛
19¾	16¼	17½	16½	16⅞	Union Oil of California	4,666,270	$25	25c	5-10-39	1.20	1.47	2.58	22½	17⅛	28¼	17½
23⅝	20⅛	22¼	20½	21½	Union Tank Car Co.	1,177,381	N.P.	30cQ	3-1-39	1.30	1.16	1.70	23½	20	31½	22
3¾	2½	3¼	3	3¼	Wilcox Oil & Gas	487,568	$5	....	5-10-28	....	.52	.24	3½	1⅝	6¼	1⅝

*Payable in 3½ per cent notes. †Includes extras. ‡One-tenth share $2 preferred stock. §Also 1½ per cent stock dividend. ‖Also right to subscribe to bonds. ¶Also 1 per cent in stock. **Also 2 per cent in stock. —Deficit.

New York Curb Exchange

1939 High	1939 Low	Week ending May 27 High	Week ending May 27 Low	Week ending May 27 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
9	5½	7½	7¼	7½	American Republics Corp.	1,308,049	$10	10c	7-11-38	$0.10	—$0.22	$0.27	11¾	5	10	6⅝
7¼	3½	3⅞	3⅜	3⅞	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	10¼	4⅞	21⅜	7
34¾	27¼	32½	32½	32½	Buckeye Pipe Line Co.	200,000	$50	50c	3-15-39	2.00	2.36	4.02	39	22½	51½	36
130	110	114	114	114	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-26-39	6.50	5.32	6.73	128	97	112	95½
9¼	5⅞	6⅝	6	6⅝	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	11	5⅛	5⅜	1½
1⅛	½	1	⅞	⅞	Cosden Petroleum	462,551	$1			....	....	.19	2⅜	⅞	5½	1⅛
23¾	17½	21⅜	20⅞	21½	Creole Petroleum	6,975,383	$5	50cSA†	6-15-39	1.00	1.64	1.61	27½	17½	38¾	20¼
7⅛	5	5¾	5½	5½	Darby Petroleum	351,390	$5	25cSA	1-15-39	.50	....	1.36	10¼	5½	18⅝	6½
2¼	1⅝	2¼	2¼	2¼	Derby Oil & Refining	263,162	N.P.			....	—.91	1.34	3½	1½	8⅜	2¼
20	17½	..	..	..	Eureka Pipe Line	50.000	$50	50c	2-1-39	3.00	—.37	—.12	31	16	47½	24½
40	29¼	33⅞	32¾	33¾	Gulf Oil Corp.	9.076.202	$25	25cQ	4-1-39	1.00	1.43	3.51	46⅞	33	63½	33
69⅜	53	57¾	55¼	57½	Humble Oil & Refining	8,987,840	N.P.	37½c	7-2-39	3.00	3.98	5.22	72⅝	56	87	54⅞
17	14⅜	16½	16⅛	16½	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	6-1-39	1.25	.96	.98	19½	14⅛	24¼	14½
7	5⅝	6½	6¼	6½	Indiana Pipe Line	300,000	$10	30c	5-15-39	.50	.47	1.03	9⅜	6	15	5⅞
27½	22⅜	25¾	25¼	25¾	International Petroleum	14,324,088	N.P.	1.00†‡	6-1-39	2.50	1.98	....	31¼	21	39½	23½
3½	2¼	2½	2½	2½	Kirby Petroleum Co.	500.000	$1	10c	4-15-38	.10	.14	.17	5	2⅛	8¾	2⅝
9½	7⅛	9⅜	9⅛	9⅛	Lone Star Gas	5.553,747	N.P.	20c	4-20-39	.60	.88	1.14	10⅜	6⅝	14¼	5¼
7¾	4⅞	6⅛	5⅜	6	Louisiana Land & Exp.	2.977.449	N.P.	10cQ	3-15-39	.45	.45	.58	9⅜	6½	15¼	6¾
17	15	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-39	1.00	2.28	3.26	24	16	33½	17
8¾	7	8	7⅞	8	Midwest Oil Co.	998,474	$10	50c	12-15-38	1.00	.93	1.14	9¾	6⅝	14⅝	6¼
5½	4⅞	5½	5⅜	5½	Mountain Producers	1,593,584	$10	30cSA	6-15-39	.60	.62	.76	5¾	4½	7⅞	4⅛
13¼	11¼	12¼	11⅞	12⅛	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-39	1.00	.84	.96	14⅝	11½	19½	12
8½	7¼	8¼	8	8	National Transit	509,000	$12.50	35c	6-15-39	.75	.88	1.19	9¼	6½	12½	7¼
1¾	1½	1⅝	1½	1½	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	2⅜	1½	5	1⅜
4⅞	4	..	..	..	New York Transit	100,000	$5	15c	4-15-39	.25	.16	.49	4½	3½	5⅜	3⅞
5¾	4½	..	..	..	Northern Pipe Line	120,000	$10	15c	6-1-39	.35	.24	.78	6	4	12¾	5¾
7⅝	4¼	6⅛	5⅜	6	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7¾	3½	9⅝	2¾
2¾	1¼	2⅜	2¼	2⅜	Root Petroleum Co.	336.045	$1	25c	2-1-37	....	.17	—.17	4½	1⅝	12⅜	2
3	2⅛	2¼	2¼	2¼	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	4	2⅛	6½	2¼
4	3½	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-1-39	.30	—.27	.85	5⅜	3¼	7¼	3⅞
34⅞	27¾	29½	28½	29½	South Penn Oil	1,000,000	$25	37½cQ	3-31-39	1.75	1.44	4.64	39	28¾	56	35
19	17	..	..	..	Southwest Penna. Pipe Lines	35.000	$50	50cQ	4-1-39	2.00	—.41	.95	22¼	16½	42	20
18¾	17¼	18⅛	17⅞	18⅛	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-39	1.25	1.45	1.60	18¾	15	21⅛	14¾
10½	6	..	..	..	Standard Oil of Nebraska	161,403	$25	25c	3-29-37	....	—.69	—.58	8¾	5½	13¾	8
21¼	17	18½	18½	18½	Standard Oil of Ohio	753,740	$25	25c	3-15-39	1.00	1.81	3.67	22¾	16¼	45	16
2⅝	1⅞	2	1⅞	1⅞	Sunray Oil	2,007,076	$1	5c	4-27-39	.05	.23	.42	3¼	2	4⅞	2
4	2⅝	3⅛	2⅞	3⅛	Texon Oil & Land	936.024	$2	15cQ	9-30-38	.60	.56	.51	5¼	3½	7⅝	2
5½	2½	3¾	3½	3¾	Transwestern Oil Co.	750,000	$10			....	—.12	.48	7⅝	4¼	13⅞	4⅝
3⅜	1⅝	2	1⅞	2	United Gas Corp.	7,818,959	$1		.....	....	—.51	.25	5¼	2⅝	13⅞	3

†Includes extras. ‡Payable in Canadian funds. §Of which $1 was in preferred stock. — Deficit.

New or Improved Equipment

Buckeye Traction to Make and Sell "Buckeye-Emsco" Units

Buckeye bulldozers, trailbuilders, rippers and power control units, formerly manufactured on the West Coast by Emsco Derrick & Equipment Co., are now manufactured and distributed exclu-

sively by Buckeye Traction Ditcher Co. under the trade name Buckeye-Emsco. The Buckeye Traction Ditcher Co., Findlay, Ohio, announces this change effective at once, after having manufactured and sold these same units for several months for distribution east of the Rockies.

The machines will now be manufactured in Findlay only, and all sales will be handled through the regular Buckeye sales organization. Exceptional manufacturing facilities for this equipment have been developed by Buckeye in building its line of Clipper convertible excavators with vacuum control, Buckeye surface material spreaders, highway widening machines, and Buckeye R-B Finegraders.

McIntyre Enlarges Sales Agency

Gene McIntyre, Roosevelt Building, 727 West Seventh Street, Los Angeles, has enlarged his sales agency of oil well supplies and mining and industrial equipment. As Victaulic, Inc., Mr. McIntyre for several years handled the sale of Victaulic flexible pipe-couplings exclusively, but is now augmenting his business with the following: Rector Well Equipment Co., Fort Worth, Tex., Rectorhead and Rectorseal; W-K-M Co., Houston, Tex., tubing spiders and slips, pipe-straightening machines, twin-seat valves, and W-K-M lubricated gate valves; Crutcher-Rolfs-Cummings, Houston, W-K-M pipe-cleaning machines and parts, Johns Manville pipe-wrapping machine; Naylor Pipe Co., Chicago, Naylor Lockseam spiral-weld pipe; Inferno Co., Shreveport, La., firing controls, oil and gas burners, gage cocks, low-water alarm and fuel cutoff valves, various types of water gages, including the new clamp-type reflex gage; Victaulic Co. of America, New York, Victaulic flexible pipe-couplings and fittings.

Cobb Now General Manager

Willard H. Cobb, for several years general factory manager, mechanical goods plants, United States Rubber Co., has been appointed general manager of the mechanical goods and general products divisions. This position includes supervision of the manufacture of Lastex yarn and rubber thread. F. B. Davis, Jr., president, said the appointment was in line with the policy of promoting from within to fill important positions in the company. Herbert E. Smith, vice president, will continue supervision of all the activities of the divisions.

A graduate of Stevens Institute of Technology, Mr. Cobb joined United States Rubber Co. in 1914.

PACIFIC PUMP WORKS PRODUCTION SCHEDULE JUMPS

Recent large orders for both hot-oil and boiler-feed centrifugal pumps have nearly doubled the production schedule of Pacific Pumps Works, Huntington Park, Calif., according to George E. Bigelow, general manager. Pacific's new design, involving the use of mechanical and floating seals for high-suction pressure, high-temperature conditions, is said to be one of the factors contributing to mounting orders both in the United States and abroad. New equipment has been installed by Pacific recently to enable the company to keep abreast of demand.

Single-Bolt Clamp Is Applicable Wherever Wire Line Is Used

Buck Clamp Co., 1306 Caroline Street, Houston, Tex., offers a new heavy-duty forged-steel single-bolt, hinged wire-rope clamp applicable wherever wire lines are used.

Both hinged sections are broad and grooved in order to conform to the lay of the line. This large nested contact provides maximum gripping area and overcomes the tendency of lines to crush or kink. The design and strength of the clamp are said by the manufacturers to make it an ideal one for use on dead ends of rotary drilling lines. The clamp is being marketed through oil-field supply stores.

Here and There With Men Who Manufacture Equipment

Paul Clark, president of Clark Brothers Co. and vice president of Dresser Manufacturing Co., and J. B. O'Connor, vice president and sales director of Clark Brothers Co. and a director of Dresser, are making a tour of Mid-Continent oil fields. They attended the convention of the Natural Gas Section, A.G.A., in Tulsa, and the A.P.I. convention in New Orleans.

Cleveland Tractor Co. has elected H. P. Mee executive vice president.

G. M. Stickell has been advanced from assistant sales manager to sales manager of Landis Machine Co., Waynesboro, Pa., manufacturer of thread-cutting equipment.

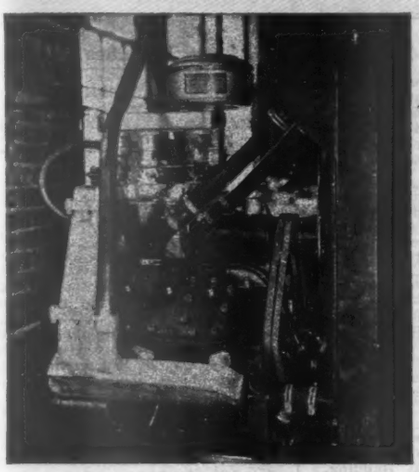
Warren President of Maloney

The Maloney Tank Manufacturing Co., of Tulsa, has announced the election of J. S. Warren as president to succeed Harry Ross, who died in Long Beach, Calif., last April 9. Other officers elected were George J. Maloney, of Long Beach, vice president, and J. C. Highfill, of Tulsa, secretary.

Mr. Warren, a native of Kentucky, has been an executive of the Maloney Tank Manufacturing Co. Since 1914. He advances to the position of president from that of vice president and treasurer. He will continue as general manager of the company, a position he has held for many years.

Distillates Are Utilized as Fuel by New Oil-Conversion Unit

The Dieselair, a new field-tested oil-conversion unit, placed on the market by Dieselair Corp., First National Bank Building, Miami, Okla., en-

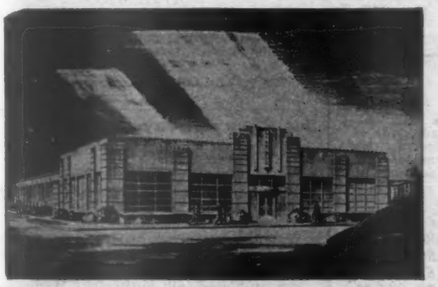


ables 85- and 95-hp. engines used for industrial prime movers to operate on standard tractor distillates and fuel oils, instead of gasoline, with high horsepowers. The Dieselair is now operating on portable oil-well rotary drill rigs, electric arc-welders, water, gasoline and crude oil line pumping. It is adaptable for oil-field equipment of many descriptions using Ford V-8 engines as prime movers. The unit operates on normal engine temperatures of 160° to 180° F.

The unit weighs 130 lb., and can be installed in an hour and a half. Only one simple adjustment for load is required, this being made by the operator after the unit is operating on oil. The Ford engine is started on gasoline, then after approximately 7 minutes, by manual turn of an air fuel rotary valve the engine operates on distillate, without engine interruption and the gasoline is automatically cut off.

New Home for Link-Belt

Link-Belt Co., Dallas, Tex., has contracted for construction of a new office and warehouse building in Dallas, Tex., at Latimer and Pierce streets.



The new building, of concrete, brick and steel, will be one story high, 105½ ft. wide and 225 ft. long. Ground has been purchased adjacent to the present building for the expansion of manufacturing facilities. There is a private railroad siding, besides trucking and parking facilities.

Scientific Control Is Applied to Making of Bessemer Steel

Jones & Laughlin Steel Corp., Pittsburgh, Pa., has applied for patent rights covering a method using photo-electric cell equipment in the operation of its Bessemer converters to apply scientific control to the manufacture of Bessemer steel. This scientific control is a basic improvement in Bessemer practice and is one of several methods on which patent applications have been made by Jones & Laughlin. It is the result of several years' intensive work in the company's metallurgical department.

The new method, the "Bessemer flame control," is said to have proven highly successful in achieving uniformity of quality in Bessemer steel, long sought by the steel industry. Exhaustive tests were conducted over a period of many months.

In conjunction with the photo-electric cells and as a part of the control system, a complete instrument panel provides accurate regulation of blowing conditions. Control of the Bessemer converter formerly depended upon the skilled eyes of the blower, who had sole responsibility in determining the proper "end point" or termination of the blow, which has a definite connection with quality results.

The new method operates with split-second speed and without the variables of the human eye. It is believed that this method of aiding J.&L. blowers in their flame-control decisions by precision equipment will develop new applications for Bessemer steels where uniform high-quality steel is required.

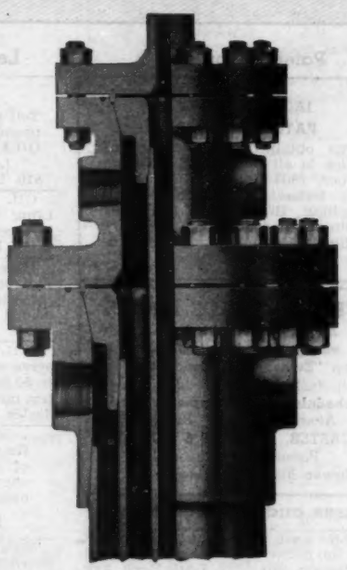
Service Pin for George Hamm

George Hamm has seen many advances in the mechanical rubber goods industry since he joined the B. F. Goodrich Co. back in 1909. He has devoted

the greater portion of this 30-year period to field sales work and is today manager of Goodrich mechanical goods sale for the Kansas City, Mo., territory. This picture shows J. H. Conners, vice president and general manager of the Goodrich mechanical division, presenting Mr. Hamm with a special employe's service pin.

New Casing- and Tubing-Head Placed on Market by Rector

Rector Well Equipment Co., Fort Worth, Tex., has added a new type of casing- and tubing-head to its line. This head, designated as Type 6M, is



of the mandrel type of suspension, and is flanged above the suspension and packing medium. It is compact, rugged, and easily installed. The Rector patented sealing-ring accomplishes the sealing of pressures and also provides a hold-down on the mandrel. The mandrel is furnished either threaded or welded directly to the casing.

The tubing-head is double-flanged when applied to the top of the flanged casinghead. This same tubing-head may be furnished with female threaded bottom connection when it is to be installed on a casinghead having threaded upper connections, such as the Rectorhead in any of its various types, or other casingheads of the upper threaded type.

Trade Literature

THE BUDA CO., Harvey, Ill.—Bulletin 958 on Buda hydraulic Diesel nozzle-tester.

IDEAL COMMUTATOR DRESSER CO., Sycamore, Ill.—Ideal catalog and handbook on motor and other maintenance equipment.

INGERSOLL-RAND, 11 Broadway, New York.—Bulletin on Type 20 two-stage high-pressure air compressors.

BALDWIN-DUCKWORTH CHAIN CORP., Springfield, Mass.—Catalog M, covering single- and multiple-strand roller chains, sprockets, and specialties.

MATHEY MEASURING-LINE REEL IN SPECIAL TRAILER

Here is shown the Type E heavy-duty measuring-line reel installed in a specially constructed trailer. The Type E unit is self-powered by a gasoline engine, mounted on the frame. The unit is equipped with a hydraulic speed control and a hydraulic governor, both contributing greater sensitivity toward locating obstructions in the hole, and safety of equipment when running in or coming out. Reel capacity is 12,000 ft. of .072 line.

C. A. Mathey Machine Works, which is introducing this oil-field equipment, recently moved into its new building at 212 South Frankfort Avenue, Tulsa. This new fireproof building, with 5,600 sq. ft. of floor space, gives additional facilities for installing reels, gas-testing equipment, and other specialties. The company also does the specialized body work in well-shooting wagons that is necessary before installing the reel unit.

CLASSIFIED ADVERTISING

Patent Attorneys

JACK A. SCHLEY
PATENT LAWYER
Patents obtained — infringement practice in all Courts—oil field experience. 1807-11 Tower Petroleum Bldg., Dallas. 2014 Second Nat'l. Bank Bldg., Houston. 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

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All cases submitted given personal attention.
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Leases and Drilling Blocks

LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

ILLINOIS 60,000 acres in and near production. Illinois Minerals Company, Cairo, Illinois.

320 ACRES, Crane Co., Tex., Magnolia lease, cheap in fee. Address 415 Littlefield Building, Austin, Texas.

SACRIFICE 40-acre Oil Lease, Chaves County, for only $10.00, full price. Guarantee title. P. O. Box 191, Clovis, N. Mex.

BROKERS and SALESMEN
only
A complete SERVICE EXPERTS in every department of the Oil Business at your SERVICE a REAL SET-UP. The best opportunity ever offered you. Leases in large or small lots at
WHOLESALE PRICES
Write today and get started right.
OIL BROKERS EXCHANGE
200 Don Juan Bldg., Santa Fe, N. M.

FOR SALE Oil and gas leases, drilling propositions and small production. All in shallow territory. Will make price on 500 or more acres, drill and case one or more wells. W. P. HARLEY, Bowling Green, Kentucky.

MISSOURI leases in blocks and scattered acreage. HARRAH & FRITH, Chillicothe, Missouri.

OIL. 1/16th, recorded oil and gas lease assignment in 40 acres adjoining discovery well tract new Kansas high gravity oil and gas field, $125.00. Guarantee to drill and equip well all costs paid when 12 interests sold. 600 to 700 ft. drilling, long lived production. Well adjoining tract has production that will exceed 19% monthly on entire investment. References, maps furnished.
BOX 389, PAOLA, KANSAS

OIL DEVELOPING shallow and deep stratas. Great opportunities for operators in this new field. No proration. Visit our field or write Chamber of Commerce, La Veta, Colo.

PRODUCING LEASES and royalties wanted. Send details to Claude L. Jordan, 409 West 9th, Bristow, Oklahoma.

2,300 ACRES free lease. Production on three sides. Want drilling contract. Box 362, Merkel, Texas.

WE BUY
producing royalties and oil properties.
RUDCO OIL & GAS COMPANY
P. O. Box 2018, Tyler, Texas.

WANT PARTY WITH CASH
to join me, active or silent, get and drill 100% shallow areas 300-1500 ft. Sell all oil. No promotion. Leases your name, then any fair arrangement. Write W. H. Haffey, 510 Wright Bldg., Okla. City, Okla.

GET THE FACTS about Forest City basin. Don't buy leases because they are cheap, buy because they are on Geophysical highs and known structures. Geologist, Box 423, St. Joseph, Mo.

Leases and Drilling Blocks

ALBERTA—CANADA
Leases and Drilling Blocks
Tell us your requirements and receive promptly full and accurate information.
OILFIELDS INFORMATION AGENCY
L. A. Duncan and C. T. Filian
810 Lancaster Bldg., Calgary, Alberta.

OIL Leases—Royalties, North Missouri, Linn; Sullivan; Adair; Mercer; Grundy; Daviess; Putnam; Harrison Counties. Write O. L. Keesee, Milan, Mo.

HAVE 83 acres in proven Vigo County, Indiana field. Standard Oil pipeline runs through this property. Drilling deal wanted. M. E. DRAKE, 7024 Amherst, St. Louis, Mo.

WILL undertake to deliver about 200,000 acres south Georgia leases in blocks 1,000 to 50,000 acres on drilling contracts. Deep test now drilling. C. W. Deming, registered dealer, Waycross, Ga.

If we do not maintain a classification exactly suited to the type of advertisement you wish to run we shall be glad to create a fitting one.

Classified Department

WRITE—C. L. Raines, P. O. Box 286, Bowling Green, Ky. regarding drilling blocks in Allen, Warren, Logan, Barren, and Monroe Counties, Kentucky.

MONTANA Syndicate with 40,000 acres leased, partly completed well, excellent oil and gas showings, needs help to complete. Write Drawer H, Neillsville, Wisconsin.

FOR SALE—11,400 acres deeded land carrying all oil, gas, and mineral rights located in Valencia County, New Mexico. Oil now being produced within approximately 50 miles of property. Will furnish spotless title for $3.00 per acre OR will sell 10 year oil and gas lease for $1.50 per acre with 15c per acre annual rental. Will not consider anything but cash deal. If interested write:
Owner, c/o J. W. B.,
Box 915,
Roswell, New Mexico.

NEW MEXICO WEEKLY OIL SCOUT REPORT. — Send for sample copy. Roy G. Barton, Box 968, Hobbs, N. M.

FOR LEASE for oil and gas purposes, 240 acres of land in Anderson County, Kansas. Oil was drilled in on this farm at a shallow depth a few years ago. W. M. Dary, 3605 E. Anaheim St., Long Beach, Calif.

LEASES AND ROYALTIES. Several thousand acres. Illinois Basin. Small or large tracts. Write—W. E. Beck, Herrick, Illinois.

Leasing and Drilling Blocks

WANTED—Party to join me in drilling several test wells to the St. Peter Horizon or Upper Knox Dolomite, which we believe should be found around 1300 to 1400 ft. in Sumner County, Tennessee. Write C. L. Raines, P. O. Box 286, Bowling Green, Ky., for particulars.

GREAT possibilities in Kentucky for repressuring old leases. Good recovery. Write W. A. Wainright, Jacksonville, Ill.

Money Raising

WANT CAPITAL to invest in perpetual mineral rights in North Permian Basin in Texas and New Mexico in major company blocks on geophysical highs. Rapid development under way now. Will take interest after all monies have been repaid. Adderss, Box 769, Blainview, Texas.

Mailing Lists

ROYALTY Lists. Unit Owners Lists. Stockholders Lists. By states. Oil Industry Mailing List Co., Tulsa Loan Building, Tulsa, Oklahoma.

For Sale—Maps

NEW MEXICO TOWNSHIP PLATS. $1.00 each; 4 in same area $3.50 covering all LEA, Eastern ROOSEVELT and EDDY COUNTIES—showing ownership and OIL DEVELOPMENT.
ZINGERY OIL MAP COMPANY
Fair Bldg. Fort Worth, Tex.

Business Cards

R. D. THURSTON
Attorney at Law
Corporation, Land and Oil Matters.
P. O. Box 1885
Dallas, Texas.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms Colonial Charter Co., Wilmington, Del.

Legal Blanks

SINCE 1908 Burkhart's legal forms—serving Mid-Cont. oil fields, including Ill., La., Mo., Ind. & Ky. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Okla.

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
703 Kennedy Bldg., Tulsa, Okla.

WILL BUY non-producing landowners royalty—under drilling wells only. P. H. HAWLEY, 727 W. 7th St., Los Angeles, Calif.

WANTED producing oil royalties and oil payments in North and West Texas and New Mexico. P. O. Box 1535, Fort Worth, Texas.

OWNERS of fractional landowners royalty interests still paying send full details to City Investing Co., 434 Roosevelt Bldg., Los Angeles, Calif.

ROYALTIES PURCHASING TRUST, LTD., Moorgate Hall, Moorgate London E. C. 2, England, are buyers of producing oil royalties.

WANTED non-producing land owners royalty under drilling wells only. Eldon J. Dick, 305 Public Service Building, Tulsa.

Business Opportunities

ATTENTION
NEW SOFT FORMATION ROTARY BIT Patented. Sound Engineering. Attractive exclusive manufacturing proposition open.
Address Box K-101
The Oil and Gas Journal,
Tulsa, Okla.

Survey Service

REMEMBER EAST TEXAS
When all other methods fail, employ my divining or dowsing method. If oil exists this method finds it. Faults, broken, treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates. George Miller, 1548 Post, Torrance, Calif.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

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CAPITAL SEEKERS
Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

CORPORATE FINANCING
Inquiries solicited from corporations requiring capital for expansions or other corporate purposes.
BROWN HARTWELL COMPANY
110 East 42nd Street
New York, N. Y.

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgement is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times		1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30	7 Lines	$2.45	$4.20	$5.95	$7.70
4 Lines	1.40	2.40	3.40	4.40	8 Lines	2.80	4.80	6.80	8.80
5 Lines	1.75	3.00	4.25	5.50	9 Lines	3.15	5.40	7.65	9.90
6 Lines	2.10	3.60	5.10	6.60	10 Lines	3.50	6.00	8.50	11.00

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1 Inch	13 times	4.50 per inch
1 Inch	26 times	4.00 per inch
1 Inch	52 times	3.50 per inch

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

PIPE—STORAGE TANKS—PRESSURE VESSELS

12 miles 4" - 10.79# line pipe, T&C, first class condition.

AVAILABLE FOR IMMEDIATE SALE

Will quote price standing, dismantled, or reerected on customer's grade on any size steel storage tanks.

20 vessels — 4' 1D x 20' x 5/16" shell x 9/16" heads, fusion welded, 200# working pressure
3 vessels — 6' x 40' x 2" riveted and welded throughout
2 vessels — 3' x 41' x 4" one piece hammerwelded complete with jackets.

SONKEN-GALAMBA SUPPLY COMPANY

W. C. Berry or H. J. Galamba,
Riverview at Second, Kansas City, Kansas

Robt. W. Duden,
2100 S. Union, Tulsa, Oklahoma

Situations Wanted

EXPERIENCED accountant in Oil and Manufacturing. Familiar with all forms of taxation. Well educated, age 34, married, now employed, desires change. Address Box J-996, The Oil and Gas Journal, Tulsa.

YOUNG man, chem. major and some industrial experience, desires position in petroleum industry. Salary secondary. Address Box K-100, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED salesman now traveling Mid-Continent oil fields wants specialty products to sell through supply stores, dealers or direct in Kansas, Oklahoma, and Texas. Address Box K-112, The Oil and Gas Journal, Tulsa, Okla.

MECHANICAL engineer continuously employed 16 yrs. now available. Oil production, equipment design and executive management. Working knowledge of French, Spanish, English. Unmarried. Travel or reside abroad if required. R. M. Benardeau, Box 827, Oklahoma City, Okla.

GAS measurement, meter and instrument man, factory trained, married, young, four years' clerical experience, go anywhere, salary secondary. Address Box K-121, The Oil and Gas Journal, Tulsa, Okla.

Ranches and Farm Lands

SPORTSMEN and HUNTERS
ATTENTION!

Wild turkey, deer, quail, etc. Own your own hunting preserve located in the heart of game section in Louisiana. For sale in tracts of from 10 to 1000 acres. Excellent goose and duck shooting, and fishing nearby. Write

BOX 182
Vicksburg, Mississippi.

For Sale—Equipment

FOR SALE

Model 55, heavy duty Wichita Falls Spudder, recommended for 4000 ft. drilling, in new condition. Complete with drilling engine, light plant, drilling and casing tools, Wilson elevators, small tools and steel tool house, located at St. Elmo, Illinois. C. L. JORDAN, Bristow, Okla. Phone 502, or The National Supply Company, St. Elmo, Illinois.

FOR SALE—Star drilling machines, #24 steam, less boiler, #22 gasoline equipped. Both in good condition with equipment. C. A. McMillen, Elyria, Ohio.

Help Wanted

WANTED — Experienced refinery designing draftsman. Give experience. Address Box K-110, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Refinery construction engineer to help build 1,000 per day tube still topping plant. Later to be employed as superintendent of plant. Middle aged, active man preferred, thoroughly trained both technically and with broad practical knowledge of refinery operations. Must be good leader and well mannered. Applicant must have thorough knowledge of welding, pipe fitting, proper setting of various items and instruments, with ability to figure out any problem which might develop. Address Box K-122, The Oil and Gas Journal, Tulsa, Okla.

WANTED—Specialty men to sell well known Valve Cup in Oklahoma, Texas, Louisiana, Kansas, and Pennsylvania. Strictly commission basis. Must have good connections with jobbers and producers. Good commission rate for men who can produce. Address Box K-120, The Oil and Gas Journal, Tulsa, Okla.

For Sale—Equipment

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.

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2 FORDSON tractors with rear-end Bearcat Winches. 3 10-20 McCormick-Deering Skid type pulling units with front-end Bearcat Winches.

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IF YOU buy or sell royalties, leases or production, DON'T FAIL to check each item listed in these classified columns. They comprise the best medium of exchange available to you.

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TEN Complete Rotary Drilling Rigs. Steam and Diesel Powered. Large and Small.

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All equipment in good condition and modern. Will sell any part or all. Especially suited for foreign country. Write me your wants.

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50,000 feet of 8" line pipe, both threaded and collared, and plain end; also a complete stock of casing and line pipe in all sizes.

One Star drilling machine complete, with cable tool capable of drilling 2,000 feet or more.

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FOR SALE—6 Cyl. 90 H. P. Portable Diesel Drilling Engine w/ selective drlg. motion control, controlled speed and controlled motion assemblies. 2 Speed reversing O. C. S. timken belted drilling countershaft unit w/ neutral brake, air cooled clutches, and skids. 120 gal. fuel tank. Portable air starting unit and lighting unit w/ 6 H. P. engine, 2½ K. W. built in chain driven generator and compressor air tanks and skids assembled. 2 Westinghouse 25/65 H. P. motors complete w/ controllers, jackshaft, blower and lighting transformer. The Palmer Oil Corp., Wichita, Kansas.

S.A.E. MEETING

(Continued from Page 21)

than crude oil reservoirs such as shale and coal deposits were referred to as evidence that the world faces no shortage of oil. The use of petroleum gases as the basis for scores of synthetic materials such as plastics and chemicals was touched upon by Dr. Dunstan as evidence of the oil industry's progress in the use of its products for the welfare of mankind.

Dr. T. G. Delbridge, Philadelphia, director of research for Atlantic Refining Co., presided at the general meeting Monday evening and introduced Dr. Dunstan.

Lubricating oil stability and engine deposits were subjects analyzed in two papers before the Fuels and Lubricants Division May 23. Prof. H. A. Everett and G. H. Keller, of Pennsylvania State College, presented a study of their tests of lubricating oil stability in small engines.

J. P. Stewart and B. W. Story, Socony-Vacuum Oil Co., reviewed results of laboratory and field tests for determining depositions in motors under various conditions of service. B. E. Sibley, Continental Oil Co., presided at this session.

W. M. Holaday, Socony-Vacuum Oil Co., presided at a fuels and lubricants section meeting where papers were presented on a means of evaluating engine performance of lubricants and on the Underwood oxidation test and its correlation with service. Dr. F. L. Miller, J. F. Kung, Jr., and Dr. R. W. Richardson, Standard Oil Development Co., prepared the paper on engine performance of lubricants and that on the Underwood test was by H. C. Hougey, research laboratories division, General Motors Corp.

Criticism of the present method of determining octane number of motor fuel and recommendations for a more representative method of test was presented by Dr. A. von Philippovich of Germany at another fuels and lubricants meeting presided over by A. G. Marshall, Shell Oil Co., Inc.

"Fundamental Mechanical Aspects of Boundary Lubrication" was the title of a paper by H. Blok, Delft laboratory, Royal Dutch-Shell group, in which service requirements for extreme pressure lubrication were reviewed in considerable detail.

William Harrigan, Texas Co., presented a paper on a million miles of road test service at a meeting of the transportation and maintenance section. The paper dealt with some of the broad deviations detected in the service performance of fuels and lubricants compared to the laboratory calculations.

The addition of a certain material to lubricating oil for Diesel engines and the comparatively superior results was discussed by G. L. Neely, Standard Oil Co. of California.

INTERNATIONAL PETROLEUM EXPOSITION BOARD

Reelected for the May 18 to 25, 1940, International Petroleum Exposition in Tulsa at the annual board meeting last week the officers discussed plans for the coming oil show. William B. Way, general manager; Alf G. Heggem, president of the Oil Well Improvements Co., vice president; H. R. Powers, assistant sales manager, Bethlehem Supply Corp., secretary; W. G. Skelly, president, Skelly Oil Co., president; Frank O. Prior, president, Stanolind Oil & Gas Co., executive committee; W. M. Bovaird, president, Bovaird Supply Co., executive committee; Frank J. Hinderliter, president of the Hinderliter Tool Co., vice president. Clyde Pape, secretary-treasurer, Selby Oil & Gas Co. is not in the picture.

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